United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

In cooperation with
Cornell University
Agricultural Experiment
Station

Soil Survey of Clinton County, New York

How To Use This Soil Survey

General Soil Map

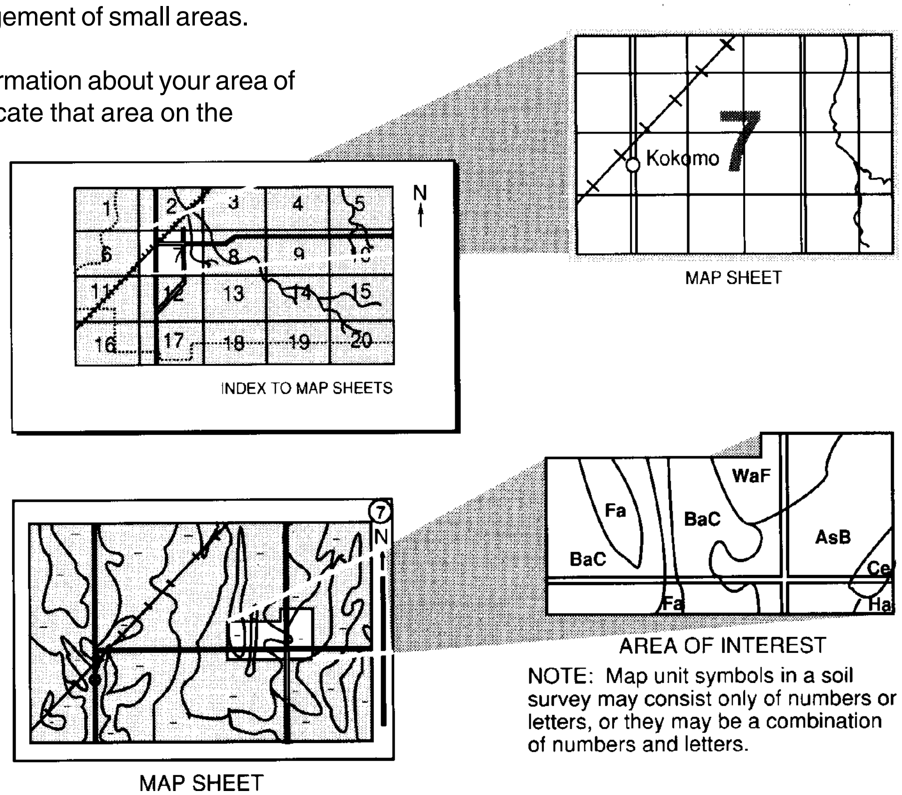
The general soil map, which is a color map, shows the survey area divided into groups of associated soils called general soil map units. This map is useful in planning the use and management of large areas.

To find information about your area of interest, locate that area on the map, identify the name of the map unit in the area on the color-coded map legend, then refer to the section **General Soil Map Units** for a general description of the soils in your area.

Detailed Soil Maps

The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.



Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Index to Map Units** (see Contents), which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey.

Major fieldwork for this soil survey was completed in 1992. Soil names and descriptions were approved in 1993. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1992. This survey was made cooperatively by the Natural Resources Conservation Service and the Cornell University Agricultural Experiment Station. Partial funding for this survey was provided by the Clinton County Legislature. Additional funding was also provided by the New York State Department of Agriculture and Markets. The survey is part of the technical assistance furnished to the Clinton County Soil and Water Conservation District.

Cover: An aerial view from Monty Bay in Lake Champlain looking west toward Rand Hill in center background and Dannemora Mountain to the left. Cultivated fields in the foreground are dominated by Muskellunge and Adjidaumo soils while nearby woods and shrubs are map units of Neckrock-Summerville complex or stony glacial till soils. Intermittent glacial beach ridge deposits belonging to Colosse-Trout River complex occur in the hardwood stands behind the visible fields.

Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at http://www.nrcs.usda.gov.

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Issued 2006

Foreword

This soil survey contains information that affects land use planning in this survey area. It contains predictions of soil behavior for selected land uses. The survey also highlights soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

This soil survey is designed for many different users. Farmers, ranchers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the survey to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. Broad areas of soils are shown on the general soil map. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described. Information on specific uses is given for each soil. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Ronald R. Alvarado
State Conservationist
Natural Resources Conservation Service

Soil Survey of Clinton County, New York

By Theodore D. Trevail, Natural Resources Conservation Service

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United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with Cornell University Agricultural Experiment Station

Clinton County is on the west side of Lake Champlain in the northeastern part of New York state (fig. 1). It is approximately 135 miles north of the city of Albany, and 44 miles south of the city of Montreal, Canada. The Province of Quebec, Canada is to the north; Franklin County is to the west; and Essex County is to the south.

The shape of the county is irregular. It has a length of 32 to 39 miles from north to south, and a width of 25 to 33 miles from east to west. The total area of Clinton County is 1,117 square miles or 714,800 acres (U.S. Department of Commerce, 1990). The city of Plattsburgh is the county seat.

General Nature of the County

The 1987 Census of Agriculture states that 25.9 percent or 172,700 acres of land in the county is in farms (U.S. Department of Commerce, 1987). Of this total, about 19,300 acres is used for corn (grain and silage), 44,900 acres is used for hay, and 3,300 acres is used for apple orchards. The amount of land in farms declined approximately 29 percent between 1969 and 1987 (U.S. Department of Commerce, 1987, 1990). While the acres in hay has also decreased, harvested areas of corn increased by 77 percent between 1969 and 1987, and orchard acreage expanded by 44 percent. Much of the decline of farmland has been toward idle or brush land existence. Farmland conversion to residential development has been significant in some areas of the county.

Dairy farming is one of the most important industries in Clinton County. Although the number of dairy farms decreased by one-half between 1969 and 1987, the number of milk cows decreased only a slight amount. Part-time farming has steadily increased over the same period (U.S. Department of Commerce, 1976).

McIntosh apples as well as other varieties are an economically important crop in Clinton County. Specialty crops such as sweet corn and strawberries are grown in a few scattered areas near Lake Champlain, while potatoes are harvested from slightly more acid soils in the Saranac River Valley and in the northwestern part of the county.

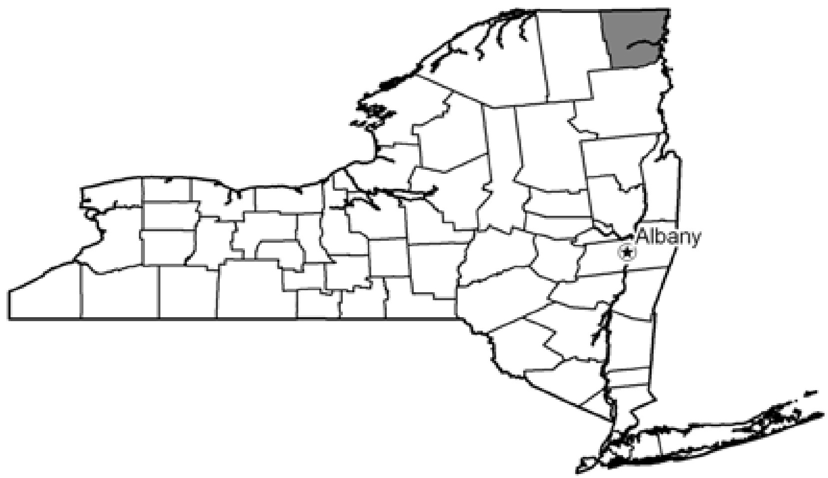

Figure 1.—Location of Clinton County in New York.

Most of Clinton County, particularly in the southwest portion, is wooded. Trees are harvested for logs, pulpwood, and fuelwood. Maple syrup is also produced in many locations. According to the U.S. Forest Service, almost two thirds of the county's land base is considered to be commercial forest land. This land is producing or capable of producing crops of industrial wood that has not been withdrawn from timber utilization (USDA, Natural Resources Conservation Service, 1993).

Two areas in Clinton County were not mapped. One place is in the town of Altona, at the site of the Ganienkeh Indian encampment. The other area is roughly delineated the old Macomb Reservation in the town of Schuyler Falls. Soil scientists were denied access to these land areas.

An earlier soil survey of Clinton County was published by the Bureau of Soils, USDA, in cooperation with Cornell University, Ithaca, New York in 1916 (USDA, Bureau of Soils, 1916). This survey updates the 1916 survey, and provides additional interpretative information and larger scale maps that show the soils in greater detail on aerial photographs.

Settlement

The first known inhabitants in the Champlain Valley were the Algonkians about 8,000 years ago. About 1300 A.D., Mohawk tribes moved into the area driving the Algonkians to the east and north. For several generations, rivalry existed between the two native groups making permanent settlement by other groups unsafe (Allan, Garland, Dugan; 1963).

Samuel de Champlain entered Lake Champlain from the St. Lawrence Valley in 1609. His voyage allowed the French to claim the entire Champlain Valley until 1759. Development did not occur because of a lack of manpower coming from French Canada. Following four major wars from 1689 to 1763 among the French, British and Indians, the victorious British began a few settlements along the shore of Lake Champlain. However, more rapid settlement took place after the American Revolution around 1783 (Allan, Garland, Dugan; 1963).

Most of the settlers became independent farmers. After providing shelter, the most pressing matter was clearing trees and stones from the land. The first consumer item from the land was potash, a byproduct of burning his felled trees. Later, farmers sold lumber and wheat to markets in Canada. Streams were impounded to run gristmills, sawmills, tanneries, asheries, and iron forges. Iron ore deposits were discovered in 1806 on Arnold Hill in the Town of Ausable, and later more deposits were mined within several other towns. Even in 1870, however, most people in Clinton County were engaged in agriculture (Allan, Garland, Dugan; 1963).

The county was named after Governor George Clinton. It was established in 1788 from a huge area that once included the present day counties of Clinton, Essex, Franklin, and Washington.

Transportation and Industry

The Champlain Valley is linked to Albany, New York by Interstate 87, railroad, the Champlain Canal, commercial bus service, and the Clinton County Airport. Interstate 87 (also known as the Adirondack Northway) connects via the Canadian highway system to the city of Montreal. The railroad consists of both the passenger service Amtrak with a station at Plattsburgh, and the freight service owned by Canadian-Pacific Railroad. Canal service also exists on the north end of Lake Champlain in the province of Quebec. Ferry service from Clinton County to Vermont embarks at Cumberland Head near Plattsburgh and at Port Kent just south of the county line. Destination points to the west are most commonly accomplished by using NY Route 3, NY Route 374, and U.S. Route 11. The Clinton Area Rural Transportation system provides service from most towns and villages throughout the county to the City of Plattsburgh.

The discovery of iron in the Arnold Hill and Lyon Mountain areas brought a major influx of settlers to the county. In 1875, the first railroad was built by the Delaware and Hudson Company to haul iron ore, eventually replacing many of the steamships. Several miles of plank roads were also developed near Lyon Mountain and Standish (Allan, Garland, Dugan; 1963). Forges throughout the county turned iron into tools, wheels, and other implements (Riley, 1976). Also, glass was manufactured at Redford on the Saranac River in the mid 1800s (Clinton County Historical Museum, 1988). A developing transportation system on Lake Champlain during this period carried iron and glass both north to Canada, and south to other markets (Riley, 1976).

Clinton County is the site of three state prisons. The prison at Dannemora is a maximum security facility and was opened in 1845 (Riley, 1976). Altona has a medium security prison and the village of Lyon Mountain has a minimum security facility.

Plattsburgh Air Force Base, a major employer in Clinton County between 1956 and 1994, deployed the FB-111 and KC-135 aircraft. Clinton County was also the site of several Atlas Intercontinental Ballistic Missiles built in the early 1960s which had a tremendous affect on the area’s economy (Strictly Business, 1992).

Both Clinton Community College and the State University of New York at Plattsburgh, as well as William H. Miner Research Institute in Chazy provide educational and research opportunities as well as employment to area residents.

The paper industry has been a part of Clinton County for about 100 years. Georgia Pacific and Imperial Wallcover produce paper products from logs supplied by local timber harvesters.

Tourism is also a major industry in this county with numerous historic sites, museums, state parks, beaches, boating facilities and fishing (Riley, 1976).

Finally, agriculture continues to be a major business in the area producing over 50 million dollars in sales annually. Dairy, meat, poultry, apples, potatoes, hay, and greenhouse crops are the main farm products.

Physiography and Geology of Clinton County, New York

David A. Franzi, Professor of Geomorphology at the State University of New York in Plattsburgh, prepared this section.

Physiography

Clinton County contains parts of two physiographic regions. The southern and western portions of the county lie within the Central Highlands Section of the Adirondack Uplands (Isachsen, Landing, Lauber, Rickard, Rogers, 1991). The Adirondack Uplands is a moderate to high relief region that is underlain primarily by high-grade Precambrian granite and syenitic gneisses. Several peaks in Clinton County exceed 600 meters in elevation above mean sea level. The highest elevation in the county is 1,167 meters (3,830 feet) at Lyon Mountain summit. Local relief in upland drainage basins ranges from about 100 meters to more than 600 meters.

The northern and eastern portions of the county lie within the Champlain and St. Lawrence lowlands. The Champlain Lowland is a low to moderate relief, southward tapering, north-south trending rift valley that is underlain by lower Paleozoic sedimentary rocks and unconsolidated Pleistocene glacial, lacustrine and marine deposits. Lowland relief ranges from a few meters to a few tens of meters. The principal topographic features are generally structurally controlled by fault systems within the lowland (Fisher, 1968). The lowest surface elevation in the county is 29 meters (95 feet) above mean sea level at the shoreline of Lake Champlain. The lowest elevation beneath Lake Champlain is approximately 55 meters (180 feet) below mean sea level east of Ausable Point (Hunt, Boardman; 1968). The boundary between the Champlain Lowland and the Adirondack Uplands is marked by a prominent fault-line scarp along much of its extent in the southern portion of the country. The boundary with the St. Lawrence Lowland in the north is more gradual where the lowland sedimentary rocks rise and lap onto the Adirondack metamorphic complex.

Bedrock Geology

The oldest rocks in Clinton County are Grenville-aged (ca. 1.1 billion years before present) metamorphic rocks. Most are metaigneous granitic and syenitic gneisses that were intruded into Grenville series metasediments (Miller and Terasme, 1960; Postel, 1951; Broughton, Fisher, Isachsen, Rickard, and Offield, 1961; Fisher, 1968). Anorthositic gneisses occur locally between West Beekmantown and Jericho, and along the Essex County border near Black Brook and Keeseville (Broughton, Fisher, Isachsen, Rickard, Offield; 1961). Inclusions of Grenville series metasedimentary rocks, such as quartzites, marbles, and mixed gneisses, occur sporadically within the county. Unmetamorphosed Late Precambrian mafic dikes intrude the metamorphic rock sequence.

The metamorphic rocks are unconformably overlain by lower Paleozoic sedimentary rocks that were deposited in a shallow epicontinental sea (Iapetus Ocean) that invaded the region following the rifting and subsidence of the Grenville supercontinent (Isachsen, Landing, Lauber, Rickard, Rogers; 1991). The Cambrian Saratoga Springs Group, composed of the Potsdam Sandstone and Theresa Formation, forms the base of the sedimentary rock sequence. These rocks are overlain, in ascending order, by the Lower Ordovician Beekmantown Group carbonates and the Middle Ordovician Chazy, Black River and Trenton group carbonates and shales.

The Potsdam Sandstone is surficially exposed along the flanks of the Adirondack Uplands throughout much of northern and central Clinton County. The Potsdam consists of a coarse to medium-grained arkose (Ausable Member) that is overlain by

a well-sorted, slightly feldspathic quartz sandstone (Keeseville Member) (Fisher, 1968). A thin, discontinuous basal member, consisting of hematitic, feldspathic, micaceous quartz sandstone with thin shale interbeds, crops out sporadically between Jericho and Churubusco (Fisher, 1968). The interbedded quartzose dolostone and dolomitic sandstone of the Theresa Formation overlies the Potsdam Sandstone and is surficially exposed in the northernmost part of the county near Mooers. The Lower Ordovician dolostones and dolomitic limestones of the Beekmantown Group overlies the Potsdam and Theresa formations. The Beekmantown Group is subdivided into the Cutting (cherty dolostone), Spellman (dolomitic limestone and dolostone), Fort Cassin (dolostone and dolomitic limestone), and Providence Island (dolostone) formations.

The Middle Ordovician Chazy, Black River and Trenton group carbonates are surficially exposed in eastern parts of the county in a narrow belt that parallels the shoreline of Lake Champlain. Their surficial distribution is structurally controlled by lowland faults and, in places, they are concealed by younger unconsolidated Pleistocene deposits. The Chazy Group, which consists primarily of fossiliferous limestones, is subdivided into the Day Point, Crown Point, and Valcour formations (Fisher, 1968). The Black River Group, represented by the Isle LaMotte Limestone, is exposed at only a few locations near Chazy and just south of Rouses Point. The Trenton Group consists of a lower limestone (Glens Falls Limestone) and an upper argillite (Cumberland Head and Stony Point formations). The argillites are generally found on the overthrust block east of the Isle LaMotte Thrust (Fisher, 1968). The thrust faults, high-angle normal faults, and folds in the Champlain Lowland are primarily associated with the Late Ordovician Taconic Orogeny in northeastern North America (Fisher, 1968).

The lower Paleozoic sedimentary rocks are intruded by Late Jurassic to Early Cretaceous diabase and lamprophyre dikes.

Glacial Geology

Deglaciation of northeastern New York probably began some time after 14,000 years B.P. (before present) with the recession of the Laurentide Ice Sheet from the eastern Mohawk and Hudson lowlands (Ridge, Franzi, Muller; 1991). Lobation of the ice front in response to deglacial thinning blocked many local drainage systems and created proglacial lakes that expanded as the ice receded (Franzi, 1992); (Miller, 1926). The Champlain Lobe lay in glacial Lake Vermont, a large proglacial lake in the Champlain Lowland that drained southward across the present divide between the Hudson and Champlain drainage basins near Glens Falls. Two stages of Lake Vermont in the Champlain Lowland, the Coveville and Fort Ann stages, are presently recognized (Woodworth, 1905a); (Woodworth, 1905b); (Chapman, 1937); (Denny, 1974). The older Coveville Stage is represented by shoreline deposits and landforms that locally lie more than 30 meters above those of the younger Fort Ann Stage. Coveville strandline deposits are not recognized north of Plattsburgh, which indicates that lake levels probably lowered to the highest Fort Ann level when the ice receded to the vicinity of Plattsburgh (Denny, 1974).

A discontinuous belt of bare sandstone areas, known locally as “Flat Rocks”, extend approximately 30 kilometers southeastward into Clinton County from Covey Hill, near Hemmingford, Province of Quebec, Canada (P.Q.). The Flat Rocks were created by the erosional effects of the catastrophic drainage of glacial Lake Iroquois and younger post-Iroquois glacial lakes (Woodworth, 1905a); (Woodworth, 1950b); (Coleman, 1937); (MacClintock and Terasme, 1960); (Denny, 1970); (Franzi, Adams, and Pair, 1993). Lake Iroquois occupied the Ontario Lowland and drained eastward across a threshold near Rome in the western Mohawk Valley. The lake expanded northeastward into the St. Lawrence Lowlands between the Adirondack Uplands in

Figure 2.—The Champlain Valley was once inundated by a large glacial Lake Vermont and a subsequent Champlain Sea. The approximate interface between marine deposits (right of the boundary) and lacustrine deposits (left of the boundary) is shown here (Denny, 1974).

the south and the receding ice margin to the north. Drainage of Lake Iroquois and subsequent glacial lakes in the Ontario and St. Lawrence Lowlands into the Champlain Lowland occurred as lower outlets between Clinton Mills and Hemmingford, P.Q. were exhumed. Outflow from these lakes stripped large areas of their surficial cover exposing the underlying Potsdam Sandstone. Jack pine (Pinus banksiana) barrens presently cover most of the sandstone pavements (Franzi and Adams, 1993).

The proglacial freshwater lakes drained when ice withdrew from the eastern St. Lawrence Lowland, near Quebec, P.Q., allowing marine water to flood the isostatically depressed St. Lawrence and Champlain lowlands. The marine episode, referred to as the Champlain Sea, is evidenced by stratified sediment containing marine fossils. Radiocarbon dates from stenohaline marine fossils in the western Champlain Sea basin (Rodrigues, 1988) indicates that the marine incursion probably occurred between 11,000 to 11,500 years B.P. The marine episode ended about 10,000 years B.P. after isostatic rebound raised the region above sea level, thus creating the present Lake Champlain.

A variably thick mantle of unconsolidated Pleistocene glacial, lacustrine, and marine deposits record the advance and retreat of the late Wisconsinan Laurentide Ice Sheet. These deposits provide the parent material for most of the soils in the county today.

A pervasive, yet discontinuous, layer of glacial till is generally found at the base of the Pleistocene section. Glacial till varies greatly in its texture, composition, and physical properties depending upon the nature of the underlying parent material and its mode of deposition. Subglacial lodgement till, deposited beneath active glacial ice, is generally massive, overconsolidated, and contains predominantly locally derived material. Till in the Adirondack Uplands, derived from resistant metamorphic rocks, is typically a thin, discontinuous veneer of sandy, low to moderately calcareous, massive to crudely bedded stony diamicton. Consequently, soils developed in upland tills, such as the Adirondack, Becket, Monadnock, Skerry, Sunapee, and Tunbridge series, are generally coarse-grained and acidic. Till in the St. Lawrence and Champlain Lowland is usually thicker and more continuous. It is also finer-grained and calcareous reflecting its sedimentary rock source. Soils developed in calcareous lowland tills include the Hogansburg, Malone, Neckrock, Runeberg, and Summerville series. The Bice, Conic, Irona, Peasleeville, Schroon, and Topknot series are generally less calcareous and are usually found in areas underlain by Potsdam Sandstone. The sandstone pavement of the “Flat Rocks” is characterized by the Ricker series. The Fernlake series, found in the southwestern corner of the county, consists of bedded diamictons that may represent water-laid till deposits (Dreimanis, 1976).

Ice-contact stratified drift deposits are characterized by a wide variability in sediment texture. Examples of ice-contact deposits in Clinton County include the Cadyville, Ellenburg and Covey Hill moraines (Denny, 1974) and the Ingraham Esker (Denny, 1972); (Diemer, 1988). Gravel pits in the Ellenburg Moraine south of Ellenburg Depot expose interbedded diamicton and stratified sand, gravel, silt and clay. These sediments were probably deposited, in part, as ice-contact subaqueous outwash fans in a proglacial lake impounded in the upper North Branch Chazy River valley (Franzi, Adams, and Pair, 1993). Moraine deposits similar to those of the Cadyville Moraine are exposed in a small gravel pit southeast of Jericho. The moraine deposits at this location consist primarily of massive to crudely bedded diamicton layers with only thin and discontinuous stratified interbeds. The Cadyville Moraine deposits probably represent a complex assortment of terrestrial ablation till and outwash deposits in upland areas, while interbedded sediment-flow diamictons, subaqueous outwash and lacustrine deposits reflect the areas where ice fronted proglacial lakes in the Saranac Valley.

The Ingraham Esker is a narrow, sinuous, 17 kilometer-long ridge of glaciofluvial sand and gravel that rises 3 to 10 meters above the Champlain Lowland between Beekmantown and Champlain (Denny, 1970); (Diemer, 1988). The esker sediment was deposited in a series of overlapping subsequent esker fans in Lake Vermont. The esker deposits are overlain by fine-grain lake-bottom deposits and fine to coarse, fossiliferous marine deposits.

Lacustrine and marine deposits vary greatly in texture and composition. Coarse-grained sand and gravel deposits are generally associated with high-energy littoral zone depositional environments such as proglacial lake deltas, ice-contact deltas, and beach deposits. Deltaic sandplains were deposited where rivers draining unglaciated uplands or meltwater streams from the waning ice sheet entered proglacial lakes. The large deltaic sandplains near Clintonville, Keeseville, and Morrisonville formed where the Ausable and Saranac rivers entered proglacial Lake Vermont or the Champlain Sea (Chapman, 1937); (Denny, 1974). Champlain and Plainfield series are typically associated with sandy deltaic deposits.

Beach deposits typically consist of cobbly to bouldery sediment deposited in low-relief, elongate ridges parallel to the shorelines of proglacial lakes. All of the beach ridges in Clinton County are found along the former shorelines of water bodies that occupied the Champlain and St. Lawrence lowlands (Woodworth, 1905b); (Denny, 1967); (Denny, 1970); (Denny, 1974). The Adams, Colosse, Coveytown, Croghan,

Fahey, Trout River, and Waddington series are typically associated with the sandy to gravelly beach deposits.

Fine-grained lacustrine and marine sediment was deposited in low-energy environments. Deposits of interbedded fine sand, silt, and clay characterize lacustrine and marine-bottom sedimentation. Thick sequences of freshwater clay, commonly varved, and fossiliferous marine clay accumulated in bathymetric lows in the former Champlain Lowland water bodies. The Adjidaumo, Kingsbury, Muskellunge, and Swanton series are typically associated with lacustrine and marine clay deposits.

Drainage

Most of Clinton County lies within the northwestern Lake Champlain watershed which drains northward via the Richelieu River to the St. Lawrence River east of Montreal, P.Q. The principal drainage basins are the Great Chazy, Saranac, Little Chazy, Little Ausable, and Salmon. The Great Chazy, Little Chazy, Salmon, and Little Ausable Rivers originate in the low mountains within Clinton County and flow generally eastward to Lake Champlain. The Saranac River, which originates in the central Adirondack Upland near Saranac Lake, drains much of central Clinton County and empties into Lake Champlain at Plattsburgh.

The southernmost part of the county lies within the Ausable River drainage basin. The Ausable River originates in the High Peaks region (Isachsen, Landing, Lauber, Rickard, and Rogers, 1991) south of Lake Placid and Keene, and flows northward to Ausable Forks. From Ausable Forks to Keeseville, the river forms the southern boundary of the county. Its principal tributary in Clinton County is Black Brook, which flows southward from the upland near the Silver Lake Mountains.

The northwestern portion of the county is drained by the Chateaugay and English rivers. The Chateaugay River originates in the uplands around Upper Chateaugay Lake and flows northward to the St. Lawrence River. The English River originates in the lowland north of Ellenburg and flows eastward and then northward around Covey Hill, P.Q. to the St. Lawrence River.

Water Supply

This section was written with assistance from Dr. Richard Lamb, State University of New York (SUNY) Plattsburgh, and the Clinton County Planning Department.

Water is obtained from a variety of surface and underground sources including deep wells, lakes, reservoirs, and springs.

About 37 percent of the people in Clinton County are serviced from surface water. The City of Plattsburgh maintains Mead and Patterson reservoirs near West Plattsburgh. Some residents in the Towns of Champlain and Beekmantown rely on water from Lake Champlain. Chazy Lake provides water to about 1,600 people in the town and village of Dannemora.

Deep wells are used extensively by both municipalities and homeowners throughout the survey area. Approximately 14 percent of Clinton County’s residents rely on public well water supplies. Cadyville, Champlain, Morrisonville, Redford, and Standish are examples of communities depending on deep water aquifers.

Most water sources in Clinton County have good quality and excellent quantity. Some supplies, particularly those of surface water, are threatened by potential pollution from residential development, industrial spills, or leachate from past use.

Soil Temperature Regimes

Temperature data from well water, air, and soil indicate three soil temperature zones within Clinton County. An approximate break between the mesic and frigid soil

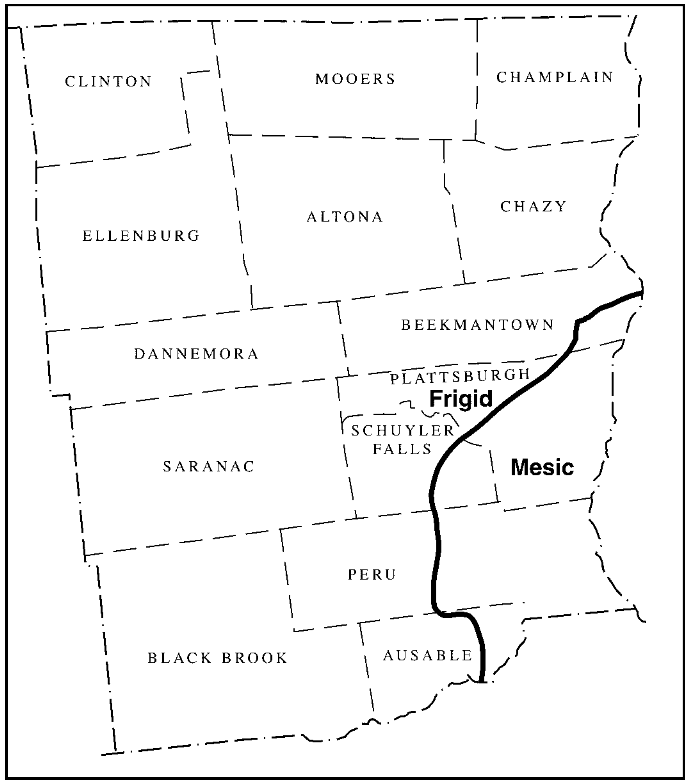

Figure 3.—Temperature data from well water, air, and soil indicate three soil temperature zones in Clinton County. An approximate break between the mesic and frigid soil temperature regimes is shown here. A colder regime (cryic) occurs on the high peaks in the southwestern part of the county; however, this regime is not shown on this map because of the map scale.

temperature regimes is shown in figure 3. A colder regime (cryic) occurs on mountains in the southwestern part of the county at elevations above 3,000 feet.

A soil with a frigid temperature regime is warmer in summer than a soil with a cryic regime, but its mean annual temperature is lower than 8 degrees C (47° F), and the difference between mean summer (June, July, and August) and mean winter (December, January, and February) soil temperatures is more than 6 degrees C (43° F) either at a depth of 50 cm (20 inches) from the soil surface, or at bedrock or a dense-layer contact, whichever is shallower. A soil with a mesic temperature regime has a mean annual soil temperature 8 degrees C or higher, but lower than 15 degrees C (59° F), and the difference between mean summer and mean winter soil temperatures is more than 6 degrees C at a depth of 50 cm from the soil surface.

The estimated break between mesic and frigid soil temperature regimes in Clinton County was based on three sources of data:

1. Soil temperature estimates from more than 27 well water temperature measurements (dug and drilled wells) during 1984 through 1986.
2. Soil temperature estimates based on average air temperature measurements plus 2 degrees F from 1951 through 1987: Chazy 46.09 degrees F; Dannemora 45.79; Plattsburgh 47.59; and Peru 46.70 degrees F.
3. Soil temperature measurements using resistance readings of thermocouples that were installed at 20 inches below the surface. Monthly readings were collected during 1986 through 1988 at 17 sites representing elevations from 110 to 2,040 feet above sea level.

As shown on the map, the mesic-frigid soil temperature break was established at 500 feet elevation in the south with Essex County, New York, and tapers in elevation toward the north to include Point Au Roche at Lake Champlain.

Climate

Ed Moldenke, Hydraulic Engineer, NRCS, helped to research data for this section.

Table 1 gives data on temperature and precipitation for the survey area as recorded at Dannemora in the period 1961 to 1990. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on length of the growing season.

In winter, the average temperature is 19 degrees F and the average daily minimum temperature is 10 degrees. The lowest temperature on record, which occurred on January 1981, is -34 degrees. In summer, the average temperature is 66 degrees and the average daily maximum temperature is 77 degrees. The highest recorded temperature, which occurred on July 1978, is 98 degrees.

Growing degree days are shown in table 1. They are equivalent to “heat units.” During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is about 35 inches. Of this, 20 inches, or 57 percent, usually falls in April through September. The growing season for most crops falls within this period. In 2 years out of 10, the rainfall in April through September is less than 13 inches. The heaviest 1-day rainfall during the period of record was 3.0 inches on November 1989. Thunderstorms occur on about 10 days each year, and most occur in August. On average between May and August, there are about 30 days with daily precipitation of 0.1 inch or more.

The average seasonal snowfall is about 103 inches. The greatest snow depth at any one time during the period of record was 50 inches. On the average, 60 days of the year have at least 1 inch of snow on the ground. The number of such days varies greatly from year to year.

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept or model of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a seasonal high water table within certain depths in most years, but they cannot predict that a seasonal high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Two areas in Clinton County were not mapped. One place is in the Town of Altona, at the site of the Ganienkeh Indian encampment. The other area roughly encompasses the old Macomb Reservation in the Town of Schuyler Falls. Soil Scientists were denied access to these land areas.

Survey Procedures

The general procedures followed in making this soil survey are described in the National Soils Handbook (USDA-Natural Resources Conservation Service, 1993) of the Natural Resources Conservation Service and the Soil Survey Manual (USDA-Soil Conservation Service, 1993). Soil scientists utilized existing soil information for

conservation planning on individual farms prior to the start of the project, as well as preliminary notes from the 1973 General Soils Report (USDA-Soil Conservation Service, 1973). Geologic references were also used including “Pleistocene Geology of the Northeast Adirondack Region, New York” (Denny, 1974).

Before field work began, preliminary boundaries of slopes and landforms were plotted stereoscopically on aerial photographs taken in 1978. Two map scales were used for the survey. The northeastern part of Clinton County has aerial coverage at a scale of 1:15,840. All other areas of the county were mapped on aerial photos with a scale of 1:24,000, subsequent to the decision to publish at the latter scale. Color infrared aerial photographs were employed about 1989 by soil scientists taken from flights in 1985 and 1986. Soil scientists also studied U.S. Geological Survey topographic maps, at a scale of 1:24,000, to relate landform, slope, and image features to the area of survey. Commonly, a reconnaissance was made by vehicle to examine road cuts and surface features before the landscape was traversed on foot.

Sample areas were selected to represent the major landscapes in Clinton County. These areas were investigated to determine soil-landform relationships, diversity of soil types within landforms, and other data related to land use interpretations. Field notes and profile descriptions were taken to document soil series and map units. As mapping progressed, these preliminary notes were used to define map unit composition. In areas of the Coveytown-Fahey-Malone association and other areas of complex soil patterns, traverses were about 100 yards apart. On the other hand, traverses were about 1/8 mile apart in areas of the Becket-Tunbridge association where soil patterns are more predictable or relatively simple.

As the traverses were made, soil scientists divided the landscape into landforms or landform segments based on use and management of the soils. For example, a hill would be separated from a depression, and a gently sloping summit from a very steep back slope of a ridge. In most areas, soil examinations along the traverses were made 100 to 800 yards apart, depending on the landscape and soil pattern.

Observations of such items as landform, blown-down trees, vegetation, roadcuts, animal burrows, stoniness, and bedrock outcrops were made without regard to spacing. Soil boundaries were determined on the basis of soil examinations, observations, and photo interpretation. Soil material was examined with the aid of a hand auger and a spade to a depth of 4 to 6 feet, or to bedrock within a depth of 6 feet. The pedons described as typical were observed and studied in pits that were dug with shovels or backhoes.

Samples for chemical and physical analyses and for analyses of engineering properties were taken from representative sites of several of the soils in the survey area. Most of this sampling occurred between 1982 and 1985. The chemical and physical analyses were made by the Soil Characterization Laboratory, Department of Soil, Crop, and Atmospheric Sciences at Cornell University, Ithaca, New York and by the National Soil Survey Laboratory, Natural Resources Conservation Service, Lincoln, Nebraska. The results of the analyses are stored in computerized data files at the respective laboratories. The analyses for engineering properties were made by the New York State Department of Transportation, Soil Mechanics Bureau. A description of the laboratory procedures can be obtained on request from the respective laboratories. The results of the studies can be obtained from Cornell University, the New York State Department of Transportation, and the state office of the Natural Resources Conservation Service.

General Soil Map Units

The general soil map units in Clinton County are described on the following pages. The texture in the descriptive heading of each general soil map unit refers to the mineral surface layer of the major soils in that map unit. The drainage class also refers only to the major soils. Some map units include soils that are less sloping or more sloping than the legend indicates. The slope range for the map unit is given in the text.

A general soil map was published in 1958 for the northern part of Franklin County. In some areas the names of adjoining map units are not exactly the same because the proportions of major soils differ from one survey area to another. Also, the concepts and names of some soil series have changed as a result of changes in the taxonomic system made since publication of the earlier survey. The matching of adjoining units is not exact because of differences in the scale of maps in the two survey areas.

Areas Dominated by Soils Formed in Glacial Outwash and Glacial Lake Shoreline Deposits

The four general soil map units in this group make up about 22 percent of the acreage in the county. The soils in this group formed in outwash material deposited by glacial meltwater and in sands and other water-worked deposits of glacial and post-glacial water bodies. Outwash deposits are mostly sandy or gravelly soils within major river valleys. Water-worked deposits are mainly on ridges and in swales at elevations of 100 to 700 feet above sea level. The dominant land use is woodland. These units contain most of the sand and gravel mining areas in the county.

1. Champlain-Adams-Croghan

Dominantly nearly level to very steep, very deep, somewhat excessively drained to moderately well drained, coarse textured soils formed in deltaic and glacial meltwater deposits

This unit consists of soils that formed in glacial outwash deposits associated with glacial lakes. It is generally on long, triangular plains that roughly parallel the major streams in Clinton County. Slope is generally 0 to 8 percent, except along streams where it is typically 35 to 70 percent.

This unit makes up about 5 percent of the county. The unit is about 34 percent Champlain soils, 18 percent Adams soils, 10 percent Croghan soils and 38 percent minor soils (fig. 4).

The Champlain soils are somewhat excessively sandy soils. Permeability is rapid throughout. The seasonal high water table is greater than 72 inches deep.

The Adams soils are somewhat excessively drained sandy soils. Permeability is rapid in the mineral surface and subsoil, and very rapid in the substratum. The seasonal high water table is greater than 72 inches deep.

The Croghan soils are moderately well drained sandy soils. Permeability is rapid in the mineral surface and very rapid in the subsoil and substratum. The seasonal high water table is 18 to 24 inches deep at some time between November and May.

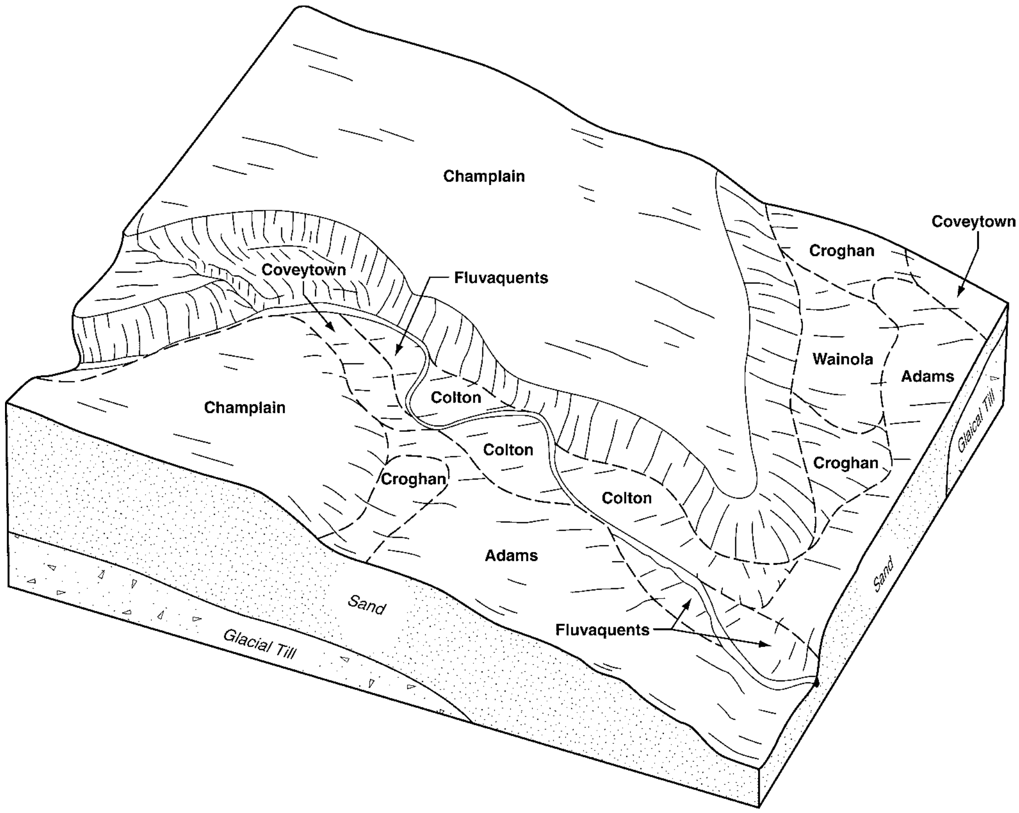

Figure 4.—Typical pattern of deltaic sands and associated soils in the Champlain - Adams - Croghan general soil map unit.

Of minor extent are the Covert, Deerfield, Wainola, Junius, Occur, Coveytown, Colton and Udifluvents soils. The moderately well drained Covert and Deerfield soils and the somewhat poorly drained Wainola and Junius soils have mottles in the subsoil, and occur along the fringe of this unit and in drainageways. Moderately well drained Occur soils and somewhat poorly drained Coveytown soils have loamy substrata and are typically near glacial till deposits. Excessively drained Colton soils are very gravelly and occur along streams. Also near streams are areas of Udifluvents which are subject to flooding.

Most areas of this unit are wooded or residential. These soils are easy to cultivate, but productivity is limited by droughtiness. Irrigation can improve productivity on nearly level and gently sloping parts of this unit. The hazard of erosion increases as the percent of slope increases. Conservation tillage, crop residue management and crop rotation are good management practices.

The less sloping areas of Champlain and Adams soils are favorable for dwellings with basements. Ground water pollution from septic tank absorption fields may be a hazard because of rapid permeability. Deep excavations are subject to caving in if not mechanically supported.

Woodland productivity is generally moderate to high. Seedling mortality, however, can be high because of droughtiness in soils with low available water capacity.

2. Colton-Adams

Nearly level to steep, very deep, excessively and somewhat excessively drained, coarse textured soils formed in glacial outwash deposits and stream terraces

This unit consists of soils that formed along valley streams and outwash plains. Slopes range from 0 to 35 percent.

This unit makes up about 5 percent of the county. It is about 35 percent Colton soils, 30 percent Adams soils, and 35 percent minor soils.

Colton soils are excessively drained, gravelly and sandy soil. Permeability is rapid in the mineral surface and subsoil, and very rapid in the substratum. The seasonal high water table is greater than 72 inches deep.

The Adams soils are somewhat excessively drained, sandy soils. Permeability is rapid in the mineral surface and subsoil, and very rapid in the substratum. The seasonal high water table is greater than 72 inches deep.

Of minor extent are the Occur, Hermon, Fernlake, Monadnock, Fluvaquents and Udifluvents soils. Moderately well drained Occur soils are on nearly level and gently sloping areas having loamy substrata within 40 inches of the surface. Hermon, Fernlake, and Monadnock soils are on similar landscapes, but have substrata with silt coating the gravel and lack stratification. Monadnock soils also have loamy subsoil. Fluvaquents and Udifluvents are soil types occupying flood prone areas near large streams.

Most areas of this unit are wooded. Crop yield is limited by droughtiness and stoniness. The hazard of erosion increases as percent of slope increases.

The less sloping areas of this unit are favorable for dwellings with basements. Ground water pollution from septic tank absorption fields may be a hazard because of rapid or very rapid permeability. Deep excavations are subject to caving in if not mechanically supported.

Woodland productivity is generally moderate to high. However, seedling mortality can be significant because of droughtiness.

3. Colosse-Trout River

Gently sloping to moderately steep, very deep, excessively drained, coarse textured soils formed in glacial lake beach ridge and outwash deposits

This unit consists of soils that formed in sand and gravel deposits and water-worked, glacial till on low, undulating beach ridges that extend roughly in a north-south direction. The soils occur most commonly at elevations of 350 to 700 feet above sea level, but some are at elevations up to 1,000 feet. Slope is dominantly 3 to 15 percent, but ranges from 3 to 25 percent.

This unit makes up about 2 percent of the county. The unit is about 40 percent Colosse soils, 35 percent Trout River soils and about 25 percent minor soils (fig. 5).

Colosse soils are excessively drained, loamy over sandy soils with a high content of gravel and cobbles. Permeability is moderately rapid in the mineral surface and subsoil, and rapid in the substratum.

Trout River soils are excessively drained, sandy soils with a high content of gravel and cobbles. Permeability is rapid throughout. The seasonal high water table is greater than 72 inches deep.

Of minor extent are the Hermon, Adams, Coveytown, Cook, Fahey, Irona, and Conic soils. Hermon soils are included in areas of glacial till with substrata having silt coatings on gravel. The excessively drained Adams soils, somewhat poorly drained Coveytown soils, and very poorly drained Cook soils have less gravel and cobbles. Moderately well drained Fahey soils are in slightly concave areas of the unit. Irona soils are shallow to bedrock. Conic soils are moderately deep to bedrock.

Most areas of this unit are wooded; however, areas that have been cleared of stones are being used for hay or corn. Although this unit is gravelly, coarse textured and droughty, the Colosse part of this unit can be productive for hay and crops having a more moderate water holding capacity. Conservation tillage, crop residue management, and rotational grazing are good management practices.

This unit commonly has cobblestones and large stones that moderately limit its use for community development. Ground water pollution from septic tank absorption fields

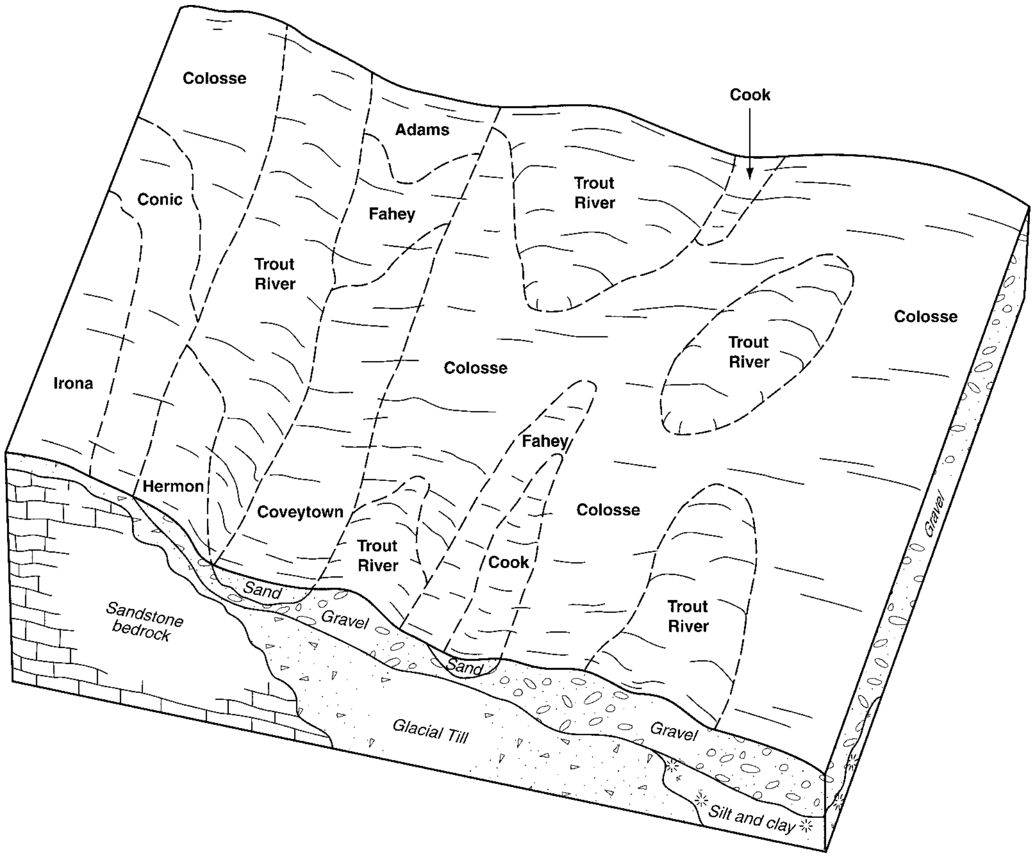

Figure 5. The Colosse-Trout River general soil map unit consists mostly of gravelly, undulating beach ridges that are oriented north-south along former shorelines of Glacial Lake Vermont.

may be a hazard because of the rapid permeability of the soil. Deep excavations are subject to caving in if the soil is not mechanically supported.

Woodland productivity is typically high with no major management problems associated with this unit. Seedling mortality can be high in parts of this unit because of droughtiness.

4. Coveytown-Fahey-Malone

Nearly level and gently sloping, very deep, moderately well drained and somewhat poorly drained, coarse textured soil overlying medium textured or moderately coarse textured deposits, on outwash plains or water-worked glacial till, and also somewhat poorly drained, moderately coarse or medium textured soils on lowland glacial till plains

This unit consists of soils formed in outwash sand and gravel and water-worked glacial till. It mainly occurs at elevations between 300 to 500 feet above sea level. Slopes range generally from 0 to 8 percent.

This unit makes up about 10 percent of the county. The unit is about 25 percent Coveytown soils, 10 percent Fahey soils, 10 percent Malone soils, and 55 percent minor soils.

The Coveytown soils are somewhat poorly drained, sandy over loamy soils. Permeability is moderately rapid or rapid in the mineral surface and subsoil, and

moderately slow or moderate in the substratum. The seasonal high water table is 12 to 18 inches below the surface at some time between November and May.

Fahey soils are moderately well drained, gravelly and sandy soils, commonly having a loamy layer between 40 to 60 inches deep. Permeability is rapid in the mineral surface, subsoil and upper substratum; but moderate or moderately slow in the underlying glacial till. The seasonal high water table is 18 to 24 inches below the surface at some time between March and May.

Malone soils are somewhat poorly drained, loamy soils. Permeability is moderate in the mineral surface, and moderately slow or slow in the subsoil and substratum. The seasonal high water table is 12 to 18 inches below the surface at some time between November and May.

Of minor extent are the Trout River, Croghan, Wainola, Runeberg, Cook, Hailesboro, Pinconning, and Wonsqueak soils. Somewhat excessively drained Trout River soils generally occur on long, narrow convex landforms. The moderately well drained Croghan soils and somewhat poorly drained Wainola soils are in areas of deep sand deposits. Very poorly drained Runeberg and Cook soils are gray or dark brown in the upper subsoil, and occur in basin-like areas and along streams. The somewhat poorly drained Hailesboro soils are dominantly silt and clay. Poorly drained and very poorly drained Pinconning soils are sandy soils underlain by clayey material. Very poorly drained Wonsqueak soils have a thick organic surface layer.

Most areas of this unit are used as woodland or pasture (fig. 6). The seasonal high water table can have an adverse affect on planting and harvesting schedules in many

Figure 6.—A band of coniferous trees (mainly white and red pine) outline an area of Plainfield and Champlain soils in this landscape. These soils occur on a sandy outwash area adjacent to the Little Ausable River. Soils associated with the Coveytown-Fahey-Malone general map unit occupy the foreground and lower sideslopes in the background. Lyman-Tunbridge-Ricker association dominate the far ridgetops.

areas of this unit. Large surface stones are also a common problem for farming. Maintaining drainage systems, stone clearing, crop residue management, and rotational grazing are good management practices.

The main limitation for community development is the seasonal high water table. Rapid permeability in the Fahey soils, and the moderately slow or slow permeability in the substratum of Coveytown and Malone soils are limitations if this unit is used for septic tank absorption fields.

Woodland productivity is limited by the seasonal high water table. Heavy equipment use during wet periods is a moderate management concern and windthrow is a hazard.

Areas Dominated by Soils Formed by Lacustrine and Marine Sediments

One general soil map unit is in this category and makes up about 5 percent of the acreage in the county. The soils in this category formed in material deposited in deep areas of glacial lake or marine environments. They are mostly silts and clays on nearly level and gently sloping areas adjacent to Lake Champlain. The dominant land use is crops and hay.

5. Muskellunge-Adjidaumo-Swanton

Nearly level and gently sloping, very deep, somewhat poorly drained to very poorly drained, fine textured and moderately fine textured soils formed on glacial lake plains

This unit consists of soils formed in glacial lacustrine and marine deposits. It is on broad plains within a few miles of the Lake Champlain shoreline. Slope is generally 0 to 3 percent, but ranges up to 8 percent.

This unit makes up about 5 percent of the county. It is about 30 percent Muskellunge soils, 20 percent Adjidaumo soils, 10 percent Swanton soils, and 40 percent minor soils.

The Muskellunge soils are somewhat poorly drained soils formed in clay and silt sediments. Permeability is moderately slow in the mineral surface, and slow in the subsoil and substratum. The seasonal high water table is 12 to 18 inches below the surface at some time between November and May.

The Adjidaumo soils are poorly drained and very poorly drained soils formed in clay and silt sediments. Permeability is moderately slow in the mineral surface, slow in the subsoil, and slow or very slow in the substratum. The seasonal high water table is at the surface to a depth of 6 inches at some time between November and June.

The Swanton soils are somewhat poorly drained soils formed in a loamy mantle over clay and silt sediments. Permeability is moderately rapid in the mineral surface and subsoil, and slow or very slow in the substratum. The seasonal high water table is 12 to 18 inches deep at some time between November and May.

Of minor extent are the Hailesboro, Roundabout, Heuvelton, Kingsbury, Cornish, Hogansburg, Malone, and Neckrock soils. The somewhat poorly drained Hailesboro and Roundabout soils are on similar landscapes, but have less clay in the subsoil and substratum. The moderately well drained Heuvelton soils are on slightly higher, more convex landscape positions. Somewhat poorly drained Kingsbury soils have a higher clay content and a slightly warmer soil temperature. Lovewell and Cornish soils are on floodplains of large streams and rivers. Hogansburg and Malone soils are on slightly convex slopes and have more rock fragments. Neckrock soils are moderately deep to bedrock and are well drained.

Most areas of this unit are in corn, hay and pasture. The seasonal high water table is the main limitation if this map unit is used for growing crops (fig. 7). Water covers the surface of Adjidaumo soils for short periods of time in the spring and after heavy rain. Farm machinery also is easily bogged down when the soils are wet, and during

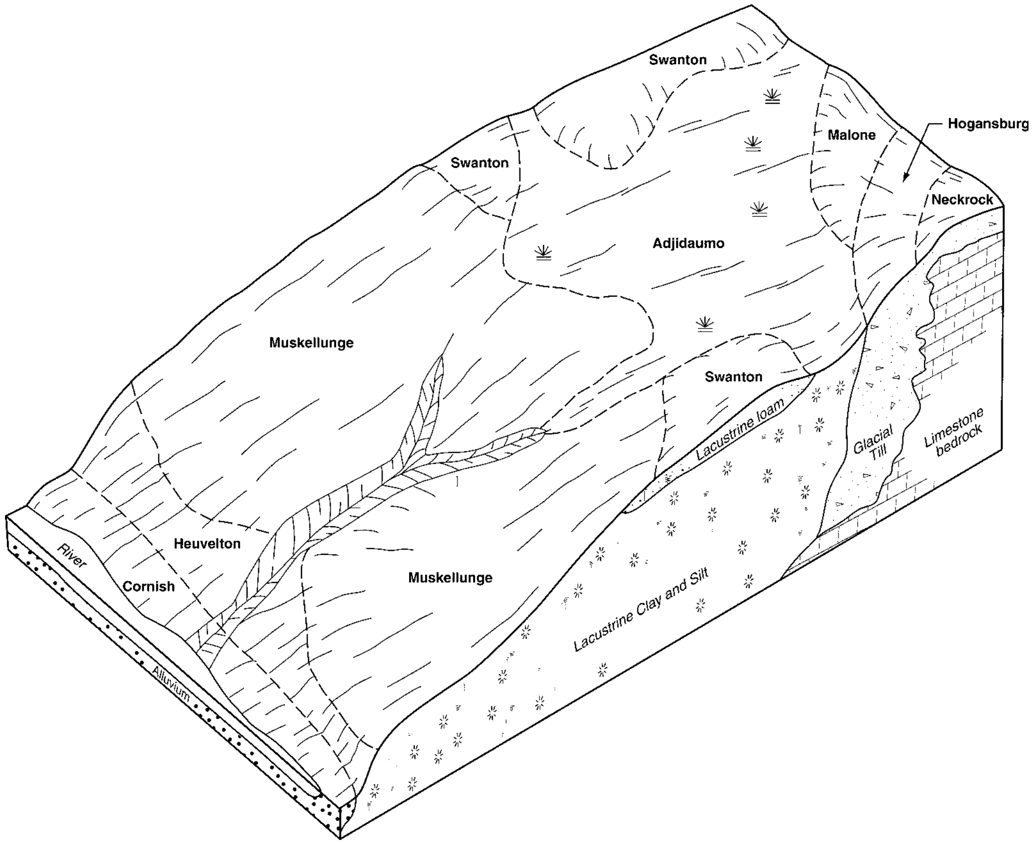

Figure 7.—Muskellunge-Adjidaumo-Swanton are used for growing corn, hay, and pasture. Because of a seasonal high water table, surface and subsurface drainage is commonly used to improve growing conditions for crops.

some years it is difficult to harvest crops. Maintaining drainage systems in cultivated fields, crop residue management, and rotational grazing are good management practices.

The main limitations for community development are the seasonal high water table and slow permeability. Frost action is also a limitation for local roads and streets.

Woodland productivity is particularly limited by the seasonal high water table in Adjidaumo soils. Heavy equipment may become stuck in the wetter part of this unit except during frozen or droughty periods.

Areas Dominated by Soils Formed in Non-Acid Glacial Till Deposits

The two general soil map units in this group make up about 11 percent of the acreage in the county. The soils in this group formed in shallow to very deep, loamy glacial till deposits derived from limestone, dolomitic limestone or calcareous shale. The dominant land uses are for hay and corn on deeper soils, and woodland on the shallow to bedrock areas.

6. Malone-Hogansburg-Runeberg

Nearly level to gently sloping, very deep, moderately well to very poorly drained, medium textured and moderately coarse textured soils formed in lowland glacial till

This unit consists of soils formed in loamy glacial till with a dense substratum. It is on smooth plains with small elongated ridges and knolls, and narrow depressions. Slopes range generally from 0 to 8 percent.

This unit makes up about 10 percent of the county. The unit is about 20 percent Malone soils, 18 percent Hogansburg soils, 7 percent Runeberg soils and 55 percent minor soils.

The Malone soils are somewhat poorly drained, loamy soils. Permeability is moderate in the mineral surface, and moderately slow or slow in the subsoil and substratum. The seasonal high water table is 12 to 18 inches below the surface at some time between November and May.

The Hogansburg soils are moderately well drained, loamy soils. Permeability is moderate in the mineral surface, subsoil and upper substratum, and moderately slow in the lower substratum. The seasonal high water table is 18 to 24 inches below the surface at some time between March and May.

The Runeberg soils are poorly drained and very poorly drained, loamy soils. Permeability is moderate in the mineral surface, moderately slow in the subsoil, and slow or moderately slow in the substratum. The seasonal high water table is at the surface to 12 inches below the surface at some time between November and July.

Of minor extent are the Coveytown, Northway, Cook, Bombay, Appleton, Massena, Muskellunge, and Neckrock soils. The Coveytown, Northway, and Cook soils have sandy mineral surface and subsoil layers overlying loamy substrata. Bombay and Appleton soils occur in areas having slightly more clay in the subsoil and generally less dense substrata. Massena soils occur on similar landscapes with a slightly warmer soil temperature. Muskellunge soils are on nearly level areas having a high clay content. Neckrock soils are on knolls where bedrock is 20 to 40 inches deep.

Most areas of this unit are used for hay, corn, or pasture. Significant acreage is also devoted to apple orchards. Although most areas of this unit are easy to work, planting and harvesting operations can be delayed by soil wetness. Erosion can be a management problem on strongly sloping areas. Conservation tillage, crop residue management, and rotational grazing are good management practices.

The main limitation if this map unit is used for community development is the seasonal high water table. The moderately slow or slow permeability in the substrata of these soils may severely limit conventional septic tank absorption fields.

Woodland productivity is also limited by the seasonal high water table in the Malone and Runeberg parts of this unit. Heavy equipment use during wet periods is a moderate management concern and windthrow is a hazard.

7. Neckrock-Summerville

Nearly level to steep, moderately deep and shallow, well drained, medium textured and moderately coarse textured soils formed in glacial till over limestone, dolomitic limestone or calcareous shale

This unit consists of soils formed in bedrock controlled glacial till. It is on linear and rolling slopes underlain by massive limestone or calcareous shale. Slopes range mainly from 3 to 15 percent.

This unit makes up about 1 percent of the county. The unit is about 30 percent Neckrock soils, 25 percent Summerville soils, and 45 percent minor soils.

The Neckrock soils are well drained, loamy soils. The depth to bedrock is 20 to 40 inches. Permeability is moderate in the mineral surface and upper subsoil, and moderate or moderately slow in the lower subsoil and substratum. The seasonal high water table is greater than 72 inches deep.

The Summerville soils are well drained, loamy soils. The depth to bedrock is 10 to 20 inches. Permeability is moderate throughout. The seasonal high water table is greater than 72 inches deep.

Of minor extent are the Ogdensburg, Hailesboro, Hogansburg, Malone, Runeberg, and Benson soils. The Ogdensburg soils are somewhat poorly drained with mottles and gray colors in the lower subsoil. The Hailesboro soils are very deep, somewhat

poorly drained soils consisting of mainly silt and clay. Hogansburg, Malone, and Runeberg soils are very deep to bedrock. Benson soils have more rock fragments throughout its profile.

Most areas of this unit are used as woodland or pasture. Some areas are being used for hay. Shallow depth to bedrock and rock outcrops make management more difficult with excessive wear on machinery. Erosion can also be a management problem on strongly sloping areas. Conservation tillage, crop residue management and rotational grazing are good management practices.

The main limitation if this unit is used for community development is the depth to bedrock. Grading and smoothing operations may require additional fill material around structures. There is a risk of ground water pollution from seepage of effluent over bedrock with use of conventional septic systems on this unit.

Woodland productivity is moderately limited by depth to bedrock. Droughtiness and restricted root growth in areas of Summerville soils may cause seedling mortality during dry summers. Windthrow can be another management problem in some areas of this unit.

Areas Dominated by Soils Formed in Moderately Acid and Strongly Acid Glacial Till Deposits

The seven general soil map units in this group make up about 62 percent of the acreage in the county. The soils in this group formed in very shallow to very deep, loamy glacial till deposits derived mainly from sandstone and granite. The dominant land uses are woodland, particularly on shallow to bedrock soils, and hay and pasture on deeper soils in the Champlain Valley.

8. Irona-Conic-Topknot

Nearly level to strongly sloping, shallow and moderately deep, well drained to somewhat poorly drained, moderately coarse textured soils formed in glacial till over sandstone bedrock

This unit consists of soils formed in bedrock controlled glacial till. It is on benches and smooth plains underlain by massive sandstone bedrock. Slopes range from 0 to 15 percent.

This unit makes up about 4 percent of the county. The unit is about 25 percent Irona soils, 20 percent Conic soils, 15 percent Topknot soils, and 40 percent minor soils.

The Irona soils are well drained, loamy soils. Depth to bedrock is 10 to 20 inches. Permeability is moderate throughout. The seasonal high water table is greater than 72 inches deep.

The Conic soils are well drained, loamy soils. Depth to bedrock is 20 to 40 inches. Permeability is moderate in the mineral surface and subsoil, and slow in the substratum.

The Topknot soils are somewhat poorly drained, loamy soils. Depth to bedrock is 10 to 20 inches. Permeability is moderate throughout. The seasonal high water table is 12 to 18 inches below the surface at some time between November and May.

Of minor extent are the Chazy, Schroon, Kalurah, Peasleeville, Sabattis and Runeberg soils. Chazy soils are similar to Topknot soils, but are moderately deep to bedrock. Schroon, Kalurah, Peasleeville, Sabattis, and Runeberg soils are very deep to bedrock. Sabattis and Runeberg soils are also poorly drained and very poorly drained.

Most areas of this unit are used for woodland or pasture. Some areas are being used for hay. Depth to bedrock and seasonal high water table are the main limitations to farm management. Shallow depth to bedrock makes soil management more difficult

with excessive wear on machinery. Erosion can also be a management problem on strongly sloping areas. The seasonal high water table in areas of Topknot soils may delay planting in the spring. Conservation tillage, crop residue management and rotational grazing are good management practices.

The main limitations if this map unit is used for community development are depth to bedrock and the seasonal high water table in Topknot soils. Grading and smoothing operations may require additional fill material around structures. There is a risk of ground water pollution from seepage of effluent over bedrock when conventional septic systems are installed on this unit.

Woodland productivity is limited by depth to bedrock and the seasonal high water table in Topknot soils. Droughtiness and restricted root growth in areas of Irona and Topknot soils may cause higher seedling mortality during dry periods. Windthrow can be another management problem in some areas of this unit.

9. Lyman-Tunbridge-Ricker

Gently sloping to very steep, very shallow to moderately deep, well drained and somewhat excessively drained, moderately coarse textured soils, formed in glacial till over crystalline bedrock with varying thickness of organic surficial deposits

This unit consists of soils formed in bedrock-controlled glacial till in the Adirondack Mountain region (fig. 8). It is on oval and dome-shaped hills controlled by crystalline bedrock. Slopes range from 3 to 70 percent.

Figure 8.—Fern Lake is nestled in between the bedrock-controlled ridges of Lyman-Tunbridge-Ricker association and the areas of sandy glacial till to the lower left. The Fernlake and Colton soils dominate the valley and foothills between ridges near the hamlet of Black Brook. In the center of the background are the Silver Lake Mountains and the Alder Brook Mountains are to the far left.

This unit makes up about 5 percent of the county. The unit is about 20 percent Lyman soils, 20 percent Tunbridge soils, 10 percent Ricker soils, and 50 percent minor soils.

The Lyman soils are somewhat excessively drained, loamy soils. Depth to bedrock is 10 to 20 inches. Permeability is moderately rapid throughout. The seasonal high water table is greater than 72 inches deep.

The Tunbridge soils are well drained, loamy soils. Depth to bedrock is 20 to 40 inches. Permeability is moderate or moderately rapid throughout. The seasonal high water table is greater than 72 inches deep.

The Ricker soils are well drained, dominantly organic material with a thin loamy mineral layer overlying bedrock. The depth to bedrock is 2 to 26 inches. Permeability is moderately slow to moderately rapid in the surface layer, moderately rapid in the subsurface organic material, and moderate or moderately rapid in the mineral subsurface layer.

Of minor extent are the Hogback, Rawsonville, Glebe, Skylight, Monadnock, Mundalite, and Becket soils. Hogback and Rawsonville soils have a subsoil with enriched organic matter or iron compounds (spodic horizon) that is thicker than Lyman or Tunbridge soils. Glebe and Skylight soils are in a colder soil temperature area. Monadnock, Mundalite, and Becket soils are very deep to bedrock.

Most areas of this unit are in woodland. The shallow depth to bedrock makes farm management more difficult with excessive wear on machinery in most areas of this unit. Erosion can also be a management problem on strongly sloping areas. Conservation tillage, crop residue management, and rotational grazing are good management practices.

The main limitations if this map unit is used for community development are depth to bedrock and slope. Grading and smoothing may require additional fill material around structures. There is a risk of ground water pollution from seepage of effluent over bedrock when conventional septic systems are installed on this unit.

Woodland productivity is limited by depth to bedrock. Droughtiness and restricted root growth in areas of Lyman soils may cause higher seedling mortality during dry periods. Windthrow can be another management problem in some areas of this unit.

10. Rockoutcrop-Ricker

Nearly level and gently sloping, well drained areas of sandstone bedrock exposures and very shallow to moderately deep organic soils

This unit consists of soils formed in areas referred to as “Flat Rock” in Clinton County. It is on bedrock benches and ridges. Slopes range from 0 to 8 percent.

This unit makes up about 1 percent of the county. The unit is about 45 percent bedrock outcrops, 35 percent Ricker soils, and 20 percent minor soils.

The Ricker soils are well drained organic soils with a thin mineral layer between the organic deposits and bedrock. Depth to bedrock ranges from 2 to 26 inches. Permeability is moderately rapid in the organic material, and moderate or moderately rapid in the mineral layer.

Of minor extent are the Churubusco, Topknot, Irona, and Colosse soils. Churubusco soils are very poorly drained organic soils in basin-like areas. Topknot and Irona soils are shallow, mineral soils. Colosse soils are very deep, gravelly soils that typically occur on linear ridges.

Most areas of this soil are in native, jack pine vegetation or other woodland species. This unit is not suited to farming because of common bedrock exposures and shallow soil as well as droughtiness.

The main limitation if this unit is used for community development is depth to bedrock. Fill material for landscaping around structures would have to be transported into most areas of this unit. Ground water contamination from conventional septic tank

absorption fields can be a serious problem in most areas of this unit because of very thin soil conditions.

Woodland productivity is seriously limited because of restricted rooting depth in most areas of this unit. Windthrow, droughtiness, and seedling mortality can be primary management problems.

11. Schroon-Peasleeville

Nearly level to strongly sloping, very deep, moderately well drained and somewhat poorly drained, medium textured and moderately coarse textured soils formed in glacial till

This unit consists of very deep soils formed in mainly friable glacial till. It is on smooth and undulating till plains. Slopes range from 0 to 15 percent.

This unit makes up about 16 percent of the county. The unit is about 38 percent Schroon soils, 22 percent Peasleeville soils, and 40 percent minor soils.

The Schroon soils are moderately well drained, loamy soils. Permeability is moderate throughout. The seasonal high water table is 18 to 24 inches deep at some time between November and April.

The Peasleeville soils are somewhat poorly drained, loamy soils. Permeability is moderate throughout. The seasonal high water table is 12 to 18 inches deep at some time between November and May.

Of minor extent are the Bice, Lyonmounten, Runeberg, Sabattis, Wonsqueak and Chazy soils. The Bice soils are on more convex slopes and generally lack the mottles within a 24 inch depth that commonly occur in the Schroon soil profile. Lyonmounten and Runeberg soils are poorly drained and very poorly drained basin-like areas with a dominantly dark brown or gray profile. Sabattis and Wonsqueak soils also occur in low areas of the unit and have an organic surface layer. Chazy soils are moderately deep to bedrock.

Most non-stony areas of this unit are used for hay, corn or pasture. Stony areas are mainly wooded. Although most areas of this unit are easy to cultivate, planting and harvesting operations can be delayed by soil wetness in the Peasleeville soils and areas of the minor poorly drained soils. Erosion can be a management problem on strongly sloping areas. Maintaining drainage systems, conservation tillage, crop residue management, and rotational grazing are good management practices.

The main limitation if this unit is used for community development is the seasonal high water table. Conventional septic systems may not function properly in Peasleeville soils particularly after periods of heavy rainfall or snowmelt.

Woodland productivity is limited by the seasonal high water table in the Peasleeville part of this unit. Limited heavy equipment use during wet periods is a moderate management concern. Windthrow is a hazard.

12. Monadnock-Sunapee

Gently sloping to very steep, very deep, well drained and moderately well drained, moderately coarse textured soils formed in glacial till

This unit consists of very deep soils formed in mainly friable glacial till. It is on undulating upland plains and smooth, slightly convex hillsides. Slopes range from 3 to 60 percent.

This unit makes up about 14 percent of the county. The unit is about 35 percent Monadnock soils, 30 percent Sunapee soils and 35 percent minor soils.

The Monadnock soils are well drained, loamy soils having sandy substrata. Permeability is moderate in the mineral surface and subsoil, and moderately rapid in the substratum. The seasonal high water table is greater than 72 inches deep.

The Sunapee soils are moderately well drained, loamy soils. Permeability is

moderate in the mineral surface and subsoil, and moderate or moderately rapid in the substratum. The seasonal high water table is 18 to 36 inches deep at some time between November and May.

Of minor extent are the Fernlake, Becket, Skerry, Adirondack, Sabattis, and Tunbridge soils. Fernlake soils are on similar landscape and have a higher sand content in the subsoil. Becket, Skerry, and Adirondack soils have a dense substratum. Sabattis soils are in basin-like areas and have gray or dark brown profiles. Tunbridge soils are moderately deep to bedrock.

Most areas are stony and wooded. Non-stony areas of this unit are used for hay, corn or pasture. Although non-stony areas are easy to cultivate, planting and harvesting operations may be delayed because of soil wetness in areas of the somewhat poorly drained to very poorly drained minor soils. Erosion can be a management problem on strongly sloping areas. Conservation tillage, crop residue management, and rotational grazing are good management practices.

The main limitation if this unit is used for community development is the seasonal high water table in the Sunapee soils. Monadnock soils are better-suited for these uses. Conventional systems may not function properly during the wetter periods of the year.

Woodland productivity is only limited by the percent of slope. Very steep slopes seriously limit the maneuverability of equipment.

13. Skerry-Becket-Adirondack

Gently sloping to steep, very deep, well to somewhat poorly drained, moderately coarse textured soils formed in glacial till

This unit consists of soils formed in glacial till with dense substrata. It is usually on smooth to slightly rolling or hilly sideslopes and toeslopes. Slopes range from 3 to 35 percent.

This unit makes up about 14 percent of the county. The unit is about 30 percent Skerry soils, 20 percent Becket soils, 20 percent Adirondack soils, and 30 percent minor soils.

The Skerry soils are moderately well drained, loamy till. Permeability is moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum. The seasonal high water table is 18 to 30 inches deep at some time between November and May.

The Becket soils are well drained loamy soils. Permeability is moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum. The seasonal high water table is 24 to 42 inches below the surface at some time during March and April.

The Adirondack soils are somewhat poorly drained loamy soils. Permeability is moderate in the mineral surface and subsoil, and slow in the substratum. The seasonal high water table is 12 to 18 inches deep at some time between September and May.

Of minor extent are the Sunapee, Hermon, Colton, Sabattis, Beseman, and Lyman soils. Sunapee soils do not have a dense substratum. Hermon and Colton soils are very gravelly and sandy soils. Sabattis and Beseman soils are in basin-like areas with a relatively thick organic surface. Lyman soils are shallow to bedrock.

Most areas of this unit are in woodland. The seasonal high water table in the Skerry and Adirondack soils may delay planting or other farm operations in the spring. Erosion can be a management problem on strongly sloping areas. Conservation tillage, crop residue management, and rotational grazing are good management practices.

The main limitation for community development is the seasonal high water table in the Skerry and Adirondack soils. Conventional septic system will likely perform poorly on most areas of this unit because of soil wetness and slow percolation.

Woodland productivity is limited by the seasonal high water table and dense substratum in the Skerry and Adirondack soils. Depth of root growth may be restricted by these limitations and therefore increase windthrow potential.

14. Becket-Tunbridge

Gently sloping to steep, very deep to moderately deep, well drained, moderately coarse textured soils formed in glacial till.

This unit consists of soils formed in glacial till moderately deep to a dense substratum, or to crystalline bedrock. It is associated with ridges and hillsides of bedrock-controlled landscapes in the Adirondack Mountains (fig. 9). Slopes range from 3 to 35 percent.

This unit makes up about 8 percent of the county. The unit is about 34 percent Becket soils, 21 percent Tunbridge soils, and 45 percent minor soils.

The Becket soils are well drained, loamy soils. Depth to bedrock is greater than 60 inches. Permeability is moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum. The seasonal high water table is 24 to 42 inches below the surface at some time during March and April.

The Tunbridge soils are well drained loamy soils. Depth to bedrock is 20 to 40 inches. Permeability is moderate or moderately rapid throughout. The seasonal high water table is greater than 72 inches deep.

Of minor extent are the Skerry, Monadnock, Hermon, Lyman, Mundalite, Rawsonville and Worden soils. Moderately well drained Skerry soils occur on

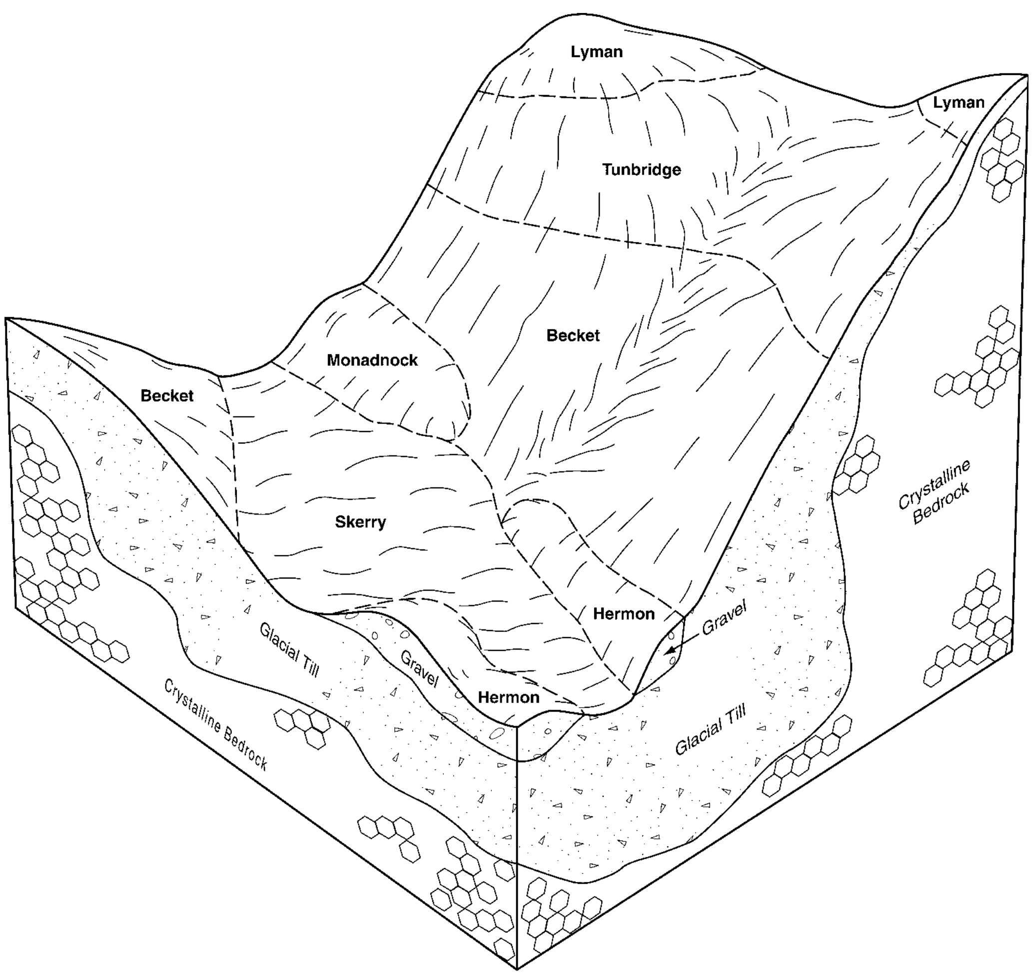

Figure 9.—Becket-Tunbridge is associated with the hillsides of bedrock-controlled landscapes in the Adirondack Mountains.

footslopes or toeslopes, and near drainageways. The Monadnock soils are very deep and lack a dense substratum. Hermon soils are very gravelly and sandy. Lyman soils are shallow to bedrock. Mundalite, Rawsonville, and Worden soils have a subsoil with enriched organic matter or iron compounds (spodic horizon) that is thicker than Becket and Tunbridge soils.

Most areas of this unit are used as woodland. Bedrock outcrops and boulders are the main obstacles to farming. Erosion can also be a management problem on strongly sloping areas. Conservation tillage, stripcropping, crop residue management, and rotational grazing are good management practices.

The main limitations if this unit is used for community development are depth to bedrock and slope. Grading and smoothing operations may require additional fill material around structures. There is a risk of ground water pollution from seepage of effluent over bedrock when conventional septic systems are installed in areas of this unit.

Woodland productivity is limited by bedrock outcrops and areas of steep slopes. Tunbridge soils can moderately restrict root growth resulting in possible windthrow. Very steep slope inclusions may seriously limit maneuverability of equipment.

Detailed Soil Map Units

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown

on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Adams loamy sand, 0 to 3 percent slopes is a phase of the Adams series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. BgE Becket-Tunbridge complex, steep, very rocky is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. ChF Champlain and Adams soils, very steep is an example of an undifferentiated group in this survey area.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Un Urban land is an example.

The detailed soil map units are designated by one of two formats within the legend:

Broadly Defined Legend—Map symbols consist of numbers followed by a letter (e.g., 375C, 941F). The numbers in the symbol represent the soil. The letter, always a capital, indicates the slope: B, C, D, and F. Symbols without a slope letter are for nearly level soils, soils named for higher than series categories, or for miscellaneous areas. This part of the legend is in numerical order.

Narrowly Defined Legend—Map symbols consist of letters (e.g., AbA, CtsB, Ly). The first letter, always a capital, is the initial letter of the soil name. The second letter (and third letter if present), is lower case and separates map units except for slope phases. The third (or fourth letter if present), always a capital, indicates the slope: A, B, C, D, E, and F. Symbols without a slope letter are for nearly level soils, soils named for higher than series categories, or for miscellaneous areas. This part of the legend is in alphabetical order.

Table 4 gives the acreage and proportionate extent of each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

15—Loxley-Beseman complex

This map unit consists of very deep, nearly level, very poorly drained soils that formed in organic deposits. The Loxley soils are in areas where the organic material is greater than 51 inches thick. The Beseman soils are generally near the margins of this unit where organic material is 16 to 51 inches thick over mineral soil. This unit typically consists of about 50 percent Loxley soils, 30 percent Beseman soils, and 20 percent other soils. Loxley and Beseman soils are so intermingled that it was not practical to map them separately. Slopes range up to 1 percent.

The typical sequence, depth, and composition of the layers of Loxley soil are as follows—

Surface layer:
0 to 16 inches, very dark brown mucky peat

Subsurface layer:
16 to 34 inches, very dark brown muck

Bottom layer:
34 to 72 inches, very dark brown muck

The typical sequence, depth, and composition of the layers of Beseman soil are as follows—

Surface layer:
0 to 2 inches, dark yellowish brown peat
2 to 10 inches, dark yellowish brown mucky peat

Subsurface layer:
10 to 35 inches, dark reddish brown muck

Bottom layer:
35 to 45 inches, black muck

Substratum:
45 to 72 inches, gray fine sandy loam

Included with this unit in mapping are about 5 percent areas of Saprists and Aquents which are ponded or flooded for most of the year. About 5 percent consist of Searsport and Sabattis soils formed in mineral deposits at the margins of this unit. Small areas of Medomak soils composed of mineral flood plain sediments are included. Small areas of sandy Adams soils and gravelly Colton soils are on small convex islands or knolls. Included areas make up about 20 percent of this unit and range up to 40 acres each.

Soil Properties of the Loxley soils—

Permeability: moderate or moderately rapid in the surface layer, and moderately slow to moderately rapid below
Available water capacity (average for a 40-inch profile): high
Depth to seasonal high water table: ranges from 12 inches above the soil surface to 12 inches below the surface from November through July
Root zone: mainly to 12 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Beseman soils—

Permeability: moderate or moderately rapid in the organic part, and moderately slow in the substratum
Available water capacity (average for a 40-inch profile): high
Depth to seasonal high water table: 24 inches above the soil surface to 12 inches below the surface from November to July
Root zone: mainly to 12 inches deep
Shrink-swell potential: low in the organic part, and moderate in the substratum.
Depth to bedrock: greater than 60 inches

Most areas of this unit are in wetland woods or bogs.

This unit is poorly suited for growing cultivated crops and hay because of the seasonal high water table. The surface is ponded during a substantial part of the growing season. Drainage would be expensive to install and maintain. Outlets are difficult to establish without draining important wetland habitat.

This unit is poorly suited to pasture. The seasonal high water table is near the surface or covers the surface during most of the year. Areas of these soils will not support typical pasture plant species. Ground conditions are generally too soft to support livestock traffic.

The potential productivity for growing balsam fir on Loxley soils is high. The potential productivity for growing black spruce on Beseman soils is moderate. However, the organic material has low bearing strength for supporting heavy equipment. Conducting logging operations in winter when the surface is frozen may

help overcome this limitation. Because of the seasonal high water table, seedling mortality is severe except for water tolerant species. Because of the shallow rooting depth of these soils, there is potential for severe windthrow. Selecting species tolerant of wet soil conditions and averting excess thinning will reduce the windthrow potential.

The main limitations if this map unit is used as a site for dwellings are the seasonal high water table, low bearing strength, and potential for subsidence. These soils are ponded for much of the year, which may result in considerable damage to dwellings. Better suited soils should be considered for dwelling sites.

The main limitations if this map unit is used as a site for local roads and streets are the seasonal high water table, potential frost action, and potential subsidence. Better drained, more stable soils should be considered for road locations. Constructing roads on raised coarse-grained fill material and providing adequate drainage will help prevent problems due to wetness and frost action.

The main limitations if this map unit is used as a site for septic tank absorption fields are the seasonal high water table, moderately slow permeability in the substratum, and the potential for subsidence. A better suited site should be considered for this use. The high water table creates a severe risk of effluent seepage on the surface or pollution of groundwater if this unit is used for septic fields.

The main limitations if this unit is used as a site for shallow excavations are the seasonal high water table and excess organic material. Digging operations may be restricted to dry periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness and the high organic matter content.

The capability subclass is 7w.

17—Beseman-Rumney-Loxley complex

This map unit consists of very deep, poorly drained and very poorly drained soils near meandering perennial streams. The Beseman soils are generally in areas bordering nearby loamy upland areas. The loamy Rumney soils border active and abandoned stream channels where occasional flooding occurs for brief periods. Loxley soils generally occur in areas of stagnant stream flow. This unit consists of about 40 percent Beseman soils, 20 percent Rumney soils, 20 percent Loxley soils, and 20 percent other soils. The Beseman, Rumney and Loxley soils are so intermingled that it was not practical to map them separately. Slopes range up to 3 percent, but are dominantly 0 to 1 percent.

The typical sequence, depth, and composition of the layers of the Beseman soil are as follows—

Surface layer:
0 to 2 inches, dark yellowish brown peat
2 to 10 inches, dark yellowish brown mucky peat

Subsurface layer:
10 to 35 inches, dark reddish brown muck

Bottom layer:
35 to 45 inches, black muck

Substratum:
45 to 72 inches, gray fine sandy loam

The typical sequence, depth, and composition of the layers of the Rumney soil are as follows—

Surface layer:
0 to 8 inches, very dark brown silt loam

Subsurface layer:
8 to 12 inches, dark brown silt loam with few mottles

Subsoil:
12 to 16 inches, dark grayish brown very fine sandy loam with many mottles
16 to 34 inches, brown loam with many mottles

Substratum:
34 to 39 inches, light olive brown loam with few mottles
39 to 72 inches, dark gray loamy sand

The typical sequence, depth, and composition of the layers of the Loxley soil are as follows—
Surface layer:
0 to 16 inches, very dark brown mucky peat

Subsurface layer:
16 to 34 inches, very dark brown muck

Bottom layer:
34 to 72 inches, very dark brown muck

Included with this unit in mapping are about 10 percent areas of Fluvaquents where the stream floods frequently and scours the ground surface. About 5 percent of this unit are small areas of ponds particularly where beaver activity exists. Also included are areas of poorly drained and very poorly drained sandy soils. Included areas make up about 20 percent of this unit and range up to 40 acres each.

Soil Properties of the Beseman soils—

Permeability: moderate or moderately rapid in the surface and subsurface layers, and moderately slow in the substratum
Available water capacity (average for a 40-inch profile): high
Depth to seasonal high water table: 24 inches above the soil surface to 12 inches below the surface from November to July
Root zone: mainly to 12 inches deep
Shrink-swell potential: low in the organic part, and moderate in the substratum
Depth to bedrock: greater than 60 inches

Soil Properties of the Rumney soils—

Permeability: moderate or moderately rapid in the mineral surface and subsoil, and rapid in the substratum
Available water capacity (average for a 40-inch profile): high
Depth to seasonal high water table: at the surface to 18 inches deep from November through May
Root zone: mainly to 12 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Loxley soils—

Permeability: moderate or moderately rapid in the surface layer, and moderately slow to moderately rapid below
Available water capacity (average for a 40-inch profile): high
Depth to seasonal high water table: 12 inches above the soil surface to 12 inches deep from November through July
Root zone: mainly to 12 inches deep
Shrink-swell potential: low

Depth to bedrock: greater than 60 inches

Most areas of this unit are in woodland.

This map unit is not suited to growing cultivated crops and hay because of the seasonal high water table and flooding. The surface is ponded during much of the year. This unit represents important wetland wildlife habitat.

This unit is not suited to pasture. The seasonal high water table is near the surface or covers the surface during most of the year. Areas of this soil will not support typical pasture plant species. Ground conditions are generally too soft to support livestock traffic without substantial damage to vegetation.

The potential productivity for growing black spruce on this unit is moderate. The organic soil has low bearing strength for supporting heavy equipment. Timber harvest may have to occur during frozen soil conditions. Because of the seasonal high water table, seedling mortality tends to be severe except for species that are water tolerant. Because root growth is limited by saturated soil conditions, there is potential for severe windthrow. By selecting water tolerant species and avoiding excess thinning, woodlot owners can curtail windthrow.

The main limitations if this unit is used as a site for dwellings are the seasonal high water table, low bearing strength, and potential for subsidence. Better suited sites on higher positions should be considered.

The main limitations if this unit is used for local roads and streets are the seasonal high water table, potential frost action, and potential subsidence. Better drained, more stable soils should be considered for new road locations. Constructing roads on raised coarse grained fill material and providing adequate drainage will help alleviate wetness and frost action. Removal of organic material before filling will reduce the potential of subsidence and subsequent damage to the road surface.

The main limitations if this map unit is used as a site for septic tank absorption fields are the seasonal high water table, the moderately slow permeability, and the potential for subsidence. A better suited site on higher ground should be considered for this use.

The main limitations if this map unit is used as a site for shallow excavations are the seasonal high water table and excess organic material. Digging operations will be limited to dry periods of the year unless drainage is installed. Special equipment may have to be used to compensate for the low strength of organic soil material. Sloughing of soil in the excavated area may also occur because of wetness, the high organic matter content, and gravel associated with Rumney soils. Mechanical support of trench walls is important to providing a safe working environment for construction crews.

The capability subclass is 8.

367—Searsport-Borosaprists-Naumburg complex

This map unit consists of very deep, nearly level soils on upland glacial valleys. The very poorly drained Searsport soils occupy low benches above streams and outwash plains. Very poorly drained Borosaprists are generally in basin-like areas of this unit where organic deposits have accumulated. The poorly drained Naumburg soils generally occupy footslope and toeslope positions. This unit consists of about 35 percent Searsport soils, 30 percent Borosaprists, 20 percent Naumburg soils, and 15 percent other soils. The Searsport, Borosaprists and Naumburg soils are so intermingled that it was not practical to map them separately. Slope is dominantly 0 to 2 percent, but ranges up to 8 percent on footslopes.

The typical sequence, depth, and composition of the layers of the Searsport soil are as follows—

Surface: 0 to 8 inches, very dark brown muck

Substratum:
8 to 18 inches, dark grayish brown loamy sand
18 to 23 inches, dark grayish brown loamy fine sand
23 to 34 inches, dark grayish brown loamy sand
34 to 50 inches, dark gray loamy sand
50 to 72 inches, gray coarse sand

Borosaprists are highly variable and therefore do not have typical depths for layers. However, the layers generally have the following sequence and composition:
Surface layer:
0 to 7 inches, dark brown mucky peat

Subsurface layer:
7 to 30 inches, black to very dark brown muck

Substratum:
30 to 72 inches, gray fine sandy loam or silt loam

The typical sequence, depth and composition of the layers of the Naumburg soil are as follows—
Surface layer:
0 to 2 inches, dark reddish brown moderately decomposed organic material
2 to 3 inches, black highly decomposed organic matter

Subsurface layer:
3 to 7 inches, light gray sand

Subsoil:
7 to 8 inches, black to dark reddish brown loamy sand.
8 to 10 inches, reddish brown loamy sand
10 to 28 inches, yellowish red loamy sand with common mottles
28 to 33 inches, strong brown loamy fine sand with common mottles

Substratum:
33 to 49 inches, pale brown loamy fine sand with common mottles
49 to 72 inches, grayish brown fine sand

Included with this unit in mapping are about 5 percent Sabattis, Tughill and Adjidaumo soils along fringe areas near surrounding units. About 5 percent Bucksport or Loxley soils are included in larger basins and bogs. Small areas of Medomak soils occur along streams where flooding takes place. Also included are small areas that are slightly more acid in the substratum. Included areas make up about 15 percent of this unit and range up to 40 acres each.

Soil Properties of the Searsport soils—

Permeability: moderately slow to moderately rapid in the surface, and rapid in the substratum
Available water capacity (average for a 40-inch profile): moderate
Depth to seasonal high water table: 12 inches above the surface to 12 inches deep from September through July
Root zone: mainly to 12 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Borosaprists soils—

Permeability: moderately slow to moderately rapid in organic layers, and generally, moderately slow to rapid in the mineral substratum

Available water capacity (average for a 40-inch profile): high
Depth to seasonal high water table: 12 inches above the surface to 6 inches deep from September through July
Root zone: mainly to 12 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Naumburg soils—

Permeability: moderately slow to moderately rapid in the organic surface layer, moderately rapid in the mineral surface or subsurface layer, and rapid in the subsoil and substratum
Available water capacity (average for a 40-inch profile): low to moderate
Depth to seasonal high water table: 6 to 18 inches deep at some time from December through May
Root zone: mainly to 18 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in woodland.

This unit is poorly suited to growing cultivated crops and hay because of ponding and the seasonal high water table. The surface is covered by water during much of the growing season. Drainage systems cannot be installed without jeopardizing important wetlands in most areas.

This unit is poorly suited to pasture. The seasonal high water table is near the surface or covers the surface during much of the growing season. The majority of this unit will not support typical pasture plant species. During most of the year, ground conditions are generally too soft for livestock to travel without causing compaction and erosion except for areas of Naumburg soils. Rotational grazing, deferred grazing, proper stocking rates, and yearly mowing where possible are good management practices to consider.

The potential productivity for growing eastern white pine on areas of Searsport and Naumburg soils is high. The potential productivity for growing black spruce on areas of Borosaprists is moderate. The organic surface has low bearing strength for supporting heavy equipment. Timber harvest may have to take place under frozen soil conditions in most areas of this unit. Because of the seasonal high water table, seedling mortality tends to be severe except for water tolerant species. Root growth is restricted by saturated soil layers in this unit making tree windthrow likely. Managing water tolerant species and limiting thinning operations will diminish the potential for windthrow.

The main limitations if this unit is used as a site for dwellings are the seasonal high water table, ponding in Borosaprists and Searsport soils, and its tendency to subside in Borosaprists. A better suited site should be considered such as a higher landscape position nearby.

The main limitations if this unit is used as a site for local roads and streets are its tendency to subside in Borosaprists soils, ponding in Borosaprists and Searsport soils, and its potential frost action. Roads should be routed around these areas where possible. If this unit is used, these structures should be constructed on raised coarse grained fill material with adequate drainage in critical areas.

The main limitations of this unit is used for septic tank absorption fields are the seasonal high water table, ponding in Borosaprists and Searsport, and the rapid permeability in Searsport and Naumburg soils. A better suited site on a higher landscape position should be considered for this use.

The main limitations of this unit is used as a site for shallow excavations are ponding in Borosaprists and Searsport soils, excess organic material in Borosaprists,

and the tendency for trench walls to cave in. Digging operations will likely be limited to dry periods of the year unless drainage is installed. Sloughing of soil and trench wall instability may necessitate mechanical supports to protect workers from cave in. Because of high amounts of organic soil, this unit will present difficulty in maneuvering heavy conventional equipment in many areas.

The capability subclass is 5w.

375C—Colton-Adams complex, 3 to 15 percent slopes

This map unit consists of very deep, gently sloping and strongly sloping soils on terraces, kames, and valley walls. The excessively drained Colton soils formed in outwash deposits with a high sand and gravel content. The excessively drained and somewhat excessively drained Adams soils formed in sandy outwash deposits with a low gravel content. Typically, this unit is made up of about 40 percent Colton soils, 40 percent Adams soils, and 20 percent other soils. Slopes may be either uniform or complex. The Colton and Adams soils are so intermingled that it was not practical to separate them in mapping.

The typical sequence, depth, and composition of the layers of Colton soils are as follows—

Surface layer:
0 to 1 inch, black highly decomposed organic material

Subsurface layer:
1 to 3 inches, dark brown, gravelly loamy coarse sand

Subsoil:
3 to 8 inches, dark brown and strong brown, gravelly loamy coarse sand
8 to 15 inches, strong brown, gravelly loamy coarse sand
15 to 22 inches, yellowish brown, very gravelly coarse sand

Substratum:
22 to 72 inches, yellowish brown and brown, very gravelly coarse sand

The typical sequence, depth, and composition of the layers of Adams soils are as follows—

Surface layer:
0 to 7 inches, very dark grayish brown loamy sand

Subsurface layer:
7 to 9 inches, pinkish gray sand

Subsoil:
9 to 11 inches, dark reddish brown loamy sand
11 to 13 inches, dark brown loamy sand
13 to 27 inches, strong brown sand

Substratum:
27 to 35 inches, yellowish brown fine sand
35 to 72 inches, brown sand

Included with this unit in mapping are about 10 percent moderately well drained Croghan soils, somewhat poorly drained Wainola soils, and poorly drained Naumburg soils in depressions, on toe slopes, and along drainageways. About 5 percent of this unit consist of Hermon and Fernlake soils in deposits of glacial drift along valley walls and adjacent to till plains. Also included are small areas of Monadnock and Sunapee soils in deposits of loamy glacial till. Small areas of Beseman and Markey muck are in depressions where organic matter has accumulated. Small areas of Fluvaquents-Udifluvents are included along major streams where flooding occurs. Also, there are

small inclusions of very stony and very bouldery areas. Included areas make up about 20 percent of this unit and range up to 40 acres each.

Soil Properties of the Colton soils—

Permeability: rapid in the mineral surface and subsoil, and very rapid in the substratum
Available water capacity (average for a 40-inch profile): very low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Adams soils—

Permeability: rapid in the mineral surface and subsoil, and very rapid in the substratum
Available water capacity (average for a 40-inch profile): very low or low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 72 inches

Most areas of this unit are used for woodland or brush.

This unit is poorly suited to growing cultivated crops and hay. Droughtiness and low fertility are major limiting factors in crop production. Amendments of organic matter will improve soil moisture holding capacity. Small surface stones in areas of Colton soils can cause excess wear on tillage equipment. Erosion may be a significant problem where long, strongly sloping areas are cultivated. Maintaining a cover crop, manure amendments according to crop needs, crop rotation and conservation tillage can help conserve valuable topsoil and improve crop production.

This unit is poorly suited to pasture. Droughtiness commonly limits forage production. Amendments of organic matter will improve soil moisture holding capacity. Erosion may become a management concern on heavily traveled and overgrazed areas. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on areas of this unit is very high. Seedling mortality is severe because of the very low available water capacity. Planting drought-tolerant species during moist soil conditions will improve seedling survival.

Slope is a moderate limitation if this unit is used as a site for dwellings. Strongly sloping areas may require grading and landscaping expenses. Designing dwellings to conform to the natural shape of the land will help compensate for the slope limitations.

Slope is a moderate limitation if this map unit is used as a site for local roads and streets. Routing roads along the contour of land where possible will help minimize the costs associated with grading and smoothing.

The main limitation if this map unit is used as a site for septic tank absorption fields is the sandy texture which may act as a poor filter for effluent. Because of very rapid permeability, there is a possible risk of ground water contamination if a conventional septic system is installed. Included areas of Monadnock soils will probably perform better for septic fields.

The main limitation of this map unit is used as a site for shallow excavations is the tendency for side walls to cave in. Mechanically supporting trench walls will reduce the possibility of soil caving in on workers or other victims.

The capability subclass is 4e.

375F—Colton-Adams complex, 35 to 70 percent slopes

This map unit consists of very deep soils on very steep side slopes of terraces, kames, and valley walls. The excessively drained Colton soils formed in outwash deposits with a high sand and gravel content. The excessively and somewhat excessively drained Adams soils formed in sandy outwash deposits having a low gravel content. Typically, this unit is made up of about 40 percent Colton soils, 40 percent Adams soils, and 20 percent other soils. Colton and Adams soils are so intermingled that it was not practical to separate them in mapping. Slopes are generally uniform.

The typical sequence, depth, and composition of the layers of Colton soils are as follows—

Surface layer:
0 to 1 inch, black highly decomposed organic material

Subsurface layer:
1 to 3 inches, dark brown, gravelly loamy coarse sand

Subsoil:
3 to 8 inches, dark brown and strong brown, gravelly loamy coarse sand
8 to 15 inches, strong brown, gravelly loamy coarse sand
15 to 22 inches, yellowish brown, very gravelly coarse sand

Substratum:
22 to 72 inches, yellowish brown and brown, very gravelly coarse sand

The typical sequence, depth, and composition of the layers of Adams soils are as follows—

Surface layer:
0 to 7 inches, very dark grayish brown loamy sand

Subsurface layer:
7 to 9 inches, pinkish gray sand

Subsoil:
9 to 11 inches, dark reddish brown loamy sand
11 to 13 inches, dark brown loamy sand
13 to 27 inches, strong brown sand

Substratum:
27 to 35 inches, yellowish brown fine sand
35 to 72 inches, brown sand

Included with this unit in mapping are about 5 percent moderately well drained Croghan soils, somewhat poorly drained Wainola soils, and poorly drained Naumburg soils in seeps, on toe slopes, and along drainageways. About 5 percent of this unit consist of Hermon and Fernlake soils in deposits of glacial drift along valley walls and near till plains. Areas of Colton and Adams soils on steep or moderately steep slopes make up about 5 percent of this unit. Also included are small areas of Monadnock soils near glacial till. Small areas of Fluvaquents and Udifluvents are included along major streams where flooding occurs. Also, there are very stony and very bouldery inclusions. Included areas make up about 20 percent of this unit and range up to 40 acres each.

Soil Properties of the Colton soils—

Permeability: rapid in the mineral surface and subsoil, and very rapid in the substratum
Available water capacity (average for a 40-inch profile): very low

Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Adams soils—

Permeability: rapid in the mineral surface and subsoil, and very rapid in the substratum
Available water capacity (average for a 40-inch profile): very low or low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 72 inches

Most areas of this unit are in woodland.

This unit is not suited to growing cultivated crops and hay. The very steep slopes prohibit use of most farm machinery. Serious erosion is probable where vegetative cover is disturbed.

This unit is poorly suited to pasture. Very steep slopes severely restrict yearly mowing and other pasture management practices. Erosion is an important management concern on heavily traveled and overgrazed areas of this unit. Droughtiness also limits forage growth. Rotational grazing and proper stocking rates are good pasture management practices.

The potential productivity for growing eastern white pine on areas of this unit is very high. Erosion is a common management concern in areas of logging operations. Routing logging trails along the contour and installing water bars can help control erosion. Very steep slopes also severely limit safe operation of equipment. Seedling mortality may be severe because of a very low available water capacity. Planting drought-tolerant species during moist soil conditions can improve seedling survival in areas of this unit.

The main limitation of this unit for dwellings is the very steep slopes. A better suited site should be considered. Designing structures to conform with natural slope conditions and shaping the local landscape are two ways to alleviate this limitation.

The main limitation of this unit for local roads and streets is slope. Roads should be routed around this very steep unit where possible to avoid costly grading. Adapting roads to follow the contour will also lower construction costs.

The main limitations of this unit for septic tank absorption fields are very steep slopes and its sandy texture possibly being a poor filter of effluent. Better suited soils should be considered for this use. Inclusions or nearby units of Monadnock soils on less sloping areas is an example of a soil that will perform better as a site for septic fields. Because of the porous nature of these soils, there is a severe risk of ground water contamination or down slope surface seepage if a conventional septic system is installed on this unit.

The main limitations of this unit for shallow excavations are very steep slopes and the tendency for side walls to cave in. Use of conventional digging equipment is unsafe and difficult to maneuver on most of this unit. Mechanically supporting trench walls will lessen the possibility of soil caving in on workers or other victims.

The capability subclass is 7e.

651C—Monadnock-Tunbridge-Sabattis complex, rolling, very bouldery

This unit consists of rolling areas including nearly level to strongly sloping soils of upland glacial till. The very deep, well drained Monadnock soils are generally on side

slopes. The moderately deep, well drained Tunbridge are generally near slope crests adjacent to bedrock outcrops. The very deep, very poorly drained Sabattis soils are on toeslopes and on slight depressions. Boulders cover up to 3 percent of the surface of this unit. This unit consists of about 40 percent Monadnock soils, 25 percent Tunbridge soils, 20 percent Sabattis soils, and 15 percent other soils. The Monadnock, Tunbridge and Sabattis soils are so intermingled that it was not practical to map them separately. Slopes range from 0 to 15 percent, but is mainly 8 to 15 percent.

The typical sequence, depth, and composition of the layers of the Monadnock soil are as follows—

Surface layer:
2 inches thick layer of leaves, needles and roots
0 to 2 inches, dark grayish brown fine sandy loam

Subsoil layer:
2 to 4 inches, dark reddish brown very fine sandy loam
4 to 15 inches, dark brown fine sandy loam
15 to 27 inches, brown fine sandy loam
27 to 36 inches, dark yellowish brown fine sandy loam

Substratum:
36 to 48 inches, yellowish brown and dark yellowish brown loamy fine sand
48 to 72 inches, brown loamy fine sand

The typical sequence, depth, and composition of the layers of the Tunbridge soils are as follows—

Surface layer:
0 to 1 inch, very dark brown fine sandy loam

Subsurface layer:
1 to 4 inches, reddish brown fine sandy loam

Subsoil:
4 to 9 inches, reddish brown gravelly loam
9 to 16 inches, yellowish red loam.
16 to 26 inches, brown gravelly fine sandy loam.
26 inches, crystalline bedrock

The typical sequence, depth and composition of the layers of the Sabattis soil are as follows—

Surface layer:
0 to 8 inches, black muck
8 to 11 inches, very dark grayish brown and very dark brown fine sandy loam

Subsoil:
11 to 19 inches, grayish brown cobbly sandy loam with many mottles
19 to 26 inches, grayish brown gravelly fine sandy loam with many mottles

Substratum:
26 to 39 inches, light brownish gray gravelly fine sandy loam with common mottles
39 to 72 inches, brown fine sandy loam with few mottles

Included with this unit in mapping are about 5 percent moderately well drained Sunapee soils on footslopes and other slightly concave slopes. About 5 percent of this unit consists of Becket and Skerry soils in areas having a dense substratum. Also included are small areas of somewhat poorly drained Adirondack soils on toe slopes and along drainageways. Small areas of sandy Adams soils and gravelly Colton soils are included on valley sides at the edge of terraces and outwash plains. Included areas make up about 15 percent of this unit and range up to 40 acres each.

Soil Properties of the Monadnock soils—

Permeability: moderate in the mineral surface and subsoil, and moderately rapid in the substratum
Available water capacity (average for a 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Tunbridge soils—

Permeability: moderate or moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Soil Properties of the Sabattis soils—

Permeability: moderately slow to moderately rapid in the organic mantle, moderate or moderately rapid in the mineral subsurface and subsoil, and moderately slow in the substratum
Available water capacity (average for a 40-inch profile): high
Depth to seasonal high water table: at the surface to 12 inches below the surface at some time from November through May
Root zone: mainly to 14 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this map unit are in woodland.

This unit is poorly suited to growing cultivated crops and hay. The seasonal high water table in areas of the Sabattis soils will delay planting in the spring and harvesting in the fall without adequate drainage measures. Also, many surface stones as well as bedrock outcrops will impede efficient use of farm equipment. Removing stones and boulders, applying conservation tillage systems, stripcropping, and using cover crops are important practices to consider.

This unit is poorly suited to pasture. The many boulders in most areas of this map unit make the proper management of forage difficult. Erosion is a concern on the heavily traveled areas of these soils. Pastures should be managed to avoid overgrazing, significant sheet erosion, and soil compaction. Key pasture species will also compete with weeds unless grazing is controlled. The Sabattis areas of this unit provide poor habitat for most forage species. Rotational grazing, deferred grazing and proper stocking rates are good management practices.

The potential productivity for growing eastern white pine is high on areas of Monadnock and Tunbridge soils. The potential productivity for growing red maple on areas of Sabattis soils is moderate. There are no major limitations to woodland management on areas of Monadnock soils. Depth to bedrock in areas of Tunbridge soils may restrict root growth resulting in moderate windthrow. The Sabattis part of this unit has a seasonal high water table which causes ground conditions to be too soft for efficient use of heavy machinery.

The main limitations if this map unit is used as a site for dwellings with basements are the depth to bedrock in areas of Tunbridge soils and the seasonal high water table in Sabattis soils. Better suited sites will occur on areas of Monadnock soils. Dwellings with basements can also be built above bedrock in areas of Tunbridge soils and landscaped with additional fill. Diversions ditches, foundation drains and

protective coatings on basement walls will alleviate some wetness in areas of Sabattis soils.

The main severe limitation if this unit is used as a site for local roads and streets is the seasonal high water table in the Sabattis soil. More moderate limitations include frost action and the depth to bedrock in areas of Tunbridge soils. Coarse grain subgrade material and adequate drainage in critical places may also be necessary to increase road stability.

The main limitations if this unit is used as a site for septic tank absorption fields are the depth to bedrock in areas of Tunbridge soils and the seasonal high water table in the Sabattis soil. Areas of Monadnock soils provide the best site conditions for this use. Conventional septic systems will function poorly in areas of Tunbridge and Sabattis soils.

The main limitations if this unit is used as a site for shallow excavations are the tendency for areas of Monadnock soils to cave in, the depth to bedrock in areas of Tunbridge soils, and the seasonal high water table in the Sabattis soils. Mechanically supporting trench walls will help prevent the possibility of soil caving in on workers or other victims. Digging may be difficult and expensive in areas of Tunbridge soils because of hard bedrock and require blasting in some areas. Also, digging may be restricted to dry periods in areas of Sabattis soils. Excavations should be routed through deeper, well drained Monadnock soils where possible.

The capability subclass is 6s.

651D—Monadnock-Tunbridge complex, hilly, very bouldery

This map unit consists of soils on side slopes and hilly areas of upland glacial till. The very deep, well drained Monadnock soils are generally on side slopes. The moderately deep, well drained Tunbridge are generally near slope crests adjacent to bedrock outcrops. Boulders cover up to 3 percent of the surface of this unit. This unit consists of about 50 percent Monadnock soils, 20 percent Tunbridge soils, and 30 percent other soils. Monadnock and Tunbridge soils are so intermingled that it was not practical to map them separately. Slopes range from 15 to 35 percent.

The typical sequence, depth, and composition of the layers of the Monadnock soil are as follows—

Surface layer:
2 inches thick layer of leaves, needles and roots
0 to 2 inches, dark grayish brown fine sandy loam

Subsoil:
2 to 4 inches, dark reddish brown very fine sandy loam
4 to 15 inches, dark brown fine sandy loam
15 to 27 inches, brown fine sandy loam
27 to 36 inches, dark yellowish brown fine sandy loam

Substratum:
36 to 48 inches, yellowish brown and dark yellowish brown loamy fine sand
48 to 72 inches, brown loamy fine sand

The typical sequence, depth, and composition of the layers of the Tunbridge soils are as follows—

Surface layer:
0 to 1 inch, very dark brown fine sandy loam

Subsurface layer:
1 to 4 inches, reddish brown fine sandy loam

Subsoil:
4 to 9 inches, reddish brown gravelly loam
9 to 16 inches, yellowish red loam
16 to 26 inches, brown gravelly fine sandy loam
26 inches, crystalline bedrock

Included with this soils in mapping are about 10 percent Becket and Skerry soils in areas having a dense substratum. About 5 percent of this unit includes small areas of somewhat poorly drained Adirondack soils and very poorly drained Sabattis soils on toe slopes and along drainageways. In some areas, inclusions of Fernlake and Hermon soils occur where the glacial till is sandy throughout the profile. Small areas of Adams and Colton soils are included on valley sides near terraces and outwash plains. Also small areas of Lyman and Ricker soils are included where shallow to bedrock. Included areas make up about 30 percent of this unit and range up to 40 acres each.

Soil Properties of the Monadnock soils—

Permeability: moderate in the mineral surface and subsoil, and moderately rapid in the substratum
Available water capacity (average for a 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Tunbridge soils—

Permeability: moderate or moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Most areas of this map unit are in woodland.

This soil is poorly suited to growing cultivated crops and hay because of the hilly slopes and many large surface stones. Boulders and stones obstruct farm operations and cause severe wear on equipment. Erosion will also be a significant problem in cultivated areas of this unit. Also, bedrock outcrops and shallow inclusions are commonly in proximity of Tunbridge soils.

This map unit is poorly suited to pasture because of large surface stones and hilly slopes. Boulders and stones obstruct pasture management practices such as yearly mowing. Erosion is a serious management concern on heavily traveled areas. Overgrazing should be discontinued to avoid significant erosion. Moderately steep and steep slopes also create a safety concern for workers carrying out yearly mowing operations.

The potential productivity for growing eastern white pine is high on most of this unit. Because of steep slopes, maneuverability of harvesting equipment is moderately limited. The moderately deep Tunbridge soil areas within this unit may restrict root growth resulting in moderate windthrow.

The main limitations if this map unit is used as a site for dwellings are hilly slopes and the depth to bedrock in areas of Tunbridge soil. A better suited site should be considered such as lesser sloping areas of Monadnock soils. Structures built on this unit that are designed to conform to slope will generally cost less and function better. Dwellings can also be built above bedrock and landscaped with additional fill to accommodate slope conditions.

The main limitations if this unit is used as a site for local roads and streets are the moderately steep slopes and the depth to bedrock in areas of Tunbridge soils. Road location and grades should be designed to avoid steeper areas and significant bedrock exposures.

The main limitations if this map unit is used as a site for septic tank absorption fields are slope and depth to bedrock in areas of Tunbridge soils. A better suited site should be considered such as lesser sloping areas of the Monadnock soils.

The main limitations if this map unit is used as a site for shallow excavations are the tendency for cutbanks to cave in for areas of Monadnock soils, the depth to bedrock in areas of Tunbridge soils and hilly slopes. Mechanically supporting trench walls will help prevent the possibility of soil caving in on workers or other victims. Operation of digging equipment on these moderately steep and steep slopes may be difficult, costly, and unsafe. Digging may also be difficult because of hard bedrock conditions requiring blasting in some areas.

The capability subclass is 7s.

653C—Monadnock fine sandy loam, 3 to 15 percent slopes, very bouldery

This map unit consists of very deep, well drained, gently sloping and strongly sloping soils on the sides of hills and ridges in glaciated uplands. Boulders cover up to 3 percent of the surface of this unit.

The typical sequence, depth, and composition of the layers of the Monadnock soil are as follows—

Surface layer:
2 inches thick layer of leaves, needles and roots
0 to 2 inches, dark grayish brown fine sandy loam

Subsoil:
2 to 4 inches, dark reddish brown very fine sandy loam
4 to 15 inches, dark brown fine sandy loam
15 to 27 inches, brown fine sandy loam
27 to 36 inches, dark yellowish brown fine sandy loam

Substratum:
36 to 48 inches, yellowish brown and dark yellowish brown loamy fine sand
48 to 72 inches, brown loamy fine sand

Included with this soils in mapping are about 10 percent moderately well drained Sunapee soils on footslopes and other slightly concave slopes. About 5 percent of this unit consists of Becket and Skerry soils in areas having a dense substratum. Also included are small areas of somewhat poorly drained Adirondack soils and very poorly drained Sabattis soils on toe slopes and along drainageways. Small areas of moderately deep Tunbridge soils are on ridge crests and adjacent to rock outcrops. Also included in this unit are small areas of moderately steep slopes. Small areas of Adams and Colton soils are included on valley sides near terraces and outwash plains. Included areas make up about 25 percent of this unit and range up to 40 acres each.

Soil Properties—
Permeability: moderate in the mineral surface and subsoil, and moderately rapid in the substratum
Available water capacity (average for a 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted

Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in woodland or brush.

This unit is poorly suited to cultivated crops and hay. Surface boulders and stones obstruct cultivation and other equipment use. Erosion and subsequent loss of crop yields on long slopes are a potential management problem. Removing boulders and stones, applying conservation tillage systems, stripcropping and using cover crops are management practices to consider for areas of this unit.

This unit is poorly suited to pasture. Surface boulders and stones commonly obstruct proper management practices such as yearly mowing. Erosion may be a concern on the heavily traveled areas of this soil. Pastures should be managed to avoid overgrazing which can lead to significant sheet erosion and soil compaction. Key pasture species may be limited by weed competition if grazing is left unchecked. Boulder and stone removal, rotational grazing, and proper stocking rates are good management practices.

The potential productivity for growing eastern white pine is high. There are no major limitations to woodland management on this soil.

A moderate limitation if this unit is used as a site for dwellings is the strongly sloping terrain. Building sites will require some grading and landscaping expenses. Designing structures to conform to the natural terrain will help compensate for slope limitations.

A moderate limitation if this unit is used as a site for local roads and streets is the strongly sloping terrain. Constructing roads along the contour will reduce the slope limitation.

A moderate limitation if this unit is used as a site for septic tank absorption fields is the strongly sloping terrain. Gently sloping areas of this unit should be considered for this use. Placing distribution lines along the contour of the land can compensate for slope limitation.

The main limitation if this unit is used as a site for shallow excavations is the tendency for cutbanks to cave in. A moderate limitation is the strongly sloping areas. Mechanically supporting trench walls will help prevent the possibility of soil caving in on workers or other victims. Maneuvering equipment on strongly sloping areas in a safe manner may be difficult in places.

The capability subclass is 6s.

654C—Monadnock-Sabattis complex, rolling, very bouldery

This map unit consists of very deep, rolling areas including nearly level to strongly sloping soils of upland glacial till. The well drained Monadnock soils are generally on side slopes. The very poorly drained Sabattis soils are on toeslopes and slight depressions. Boulders cover up to 3 percent of the surface of this unit. This unit consists of about 60 percent Monadnock, 20 percent Sabattis soils, and 20 percent other soils. Monadnock and Sabattis soils are so intermingled that it was not practical to map them separately. Slopes range from 0 to 15 percent, but are mainly 8 to 15 percent.

The typical sequence, depth, and composition of the layers of the Monadnock soil are as follows—
Surface layer:
2 inches thick layer of leaves, needles and roots
0 to 2 inches, dark grayish brown fine sandy loam

Subsoil:
2 to 4 inches, dark reddish brown very fine sandy loam

4 to 15 inches, dark brown fine sandy loam
15 to 27 inches, brown fine sandy loam
27 to 36 inches, dark yellowish brown fine sandy loam

Substratum:
36 to 48 inches, yellowish brown and dark yellowish brown loamy fine sand
48 to 72 inches, brown loamy fine sand

The typical sequence, depth, and composition of the layers of the Sabattis soil are as follows—
Surface layer:
0 to 8 inches, black muck
8 to 11 inches, very dark grayish brown and very dark brown fine sandy loam

Subsoil:
11 to 19 inches, grayish brown cobbly sandy loam with many mottles
19 to 26 inches, grayish brown gravelly fine sandy loam with many mottles

Substratum:
26 to 39 inches, light brownish gray gravelly fine sandy loam with common mottles
39 to 72 inches, brown fine sandy loam with few mottles

Included with this unit in mapping are about 5 percent moderately well drained Sunapee soils on footslopes and other slightly concave slopes. About 5 percent of this unit consists of Becket and Skerry soils in areas having a dense substratum. Also included are small areas of somewhat poorly drained Adirondack soils on toeslopes and along drainageways. Small areas of Adams and Colton soils are included on valley sides near terraces and outwash plains. Also, small areas of moderately deep Tunbridge soils are included. Included areas make up about 20 percent of this unit and range up to 40 acres each.

Soil Properties of the Monadnock soils—

Permeability: moderate in the mineral surface and subsoil, and moderately rapid in the substratum
Available water capacity (average for a 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Sabattis soils—

Permeability: moderately slow to moderately rapid in the organic mantle, moderate or moderately rapid in the mineral subsurface and subsoil, and moderately slow in the substratum
Available water capacity (average for a 40-inch profile): high
Depth to seasonal high water table: at the surface to 12 inches below the surface at some time from November through May
Root zone: mainly to 14 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in woodland.

This unit is poorly suited to growing cultivated crops and hay. The seasonal high water table in areas of Sabattis soils will delay planting in the spring without adequate drainage measures. Also, surface boulders and stones obstruct cultivation, seeding and other management operations. Boulder and stone removal, conservation tillage systems and use of cover crops are good management practices.

This unit is poorly suited to pasture. Surface boulders and stones commonly obstruct proper management practices such as yearly mowing. Erosion can be a management concern on the heavily traveled areas of this unit. Pastures should be managed to avoid overgrazing which can lead to significant sheet erosion and soil compaction. Sabattis areas of this unit are too wet for most forage species. Rotational grazing, deferred grazing and proper stocking rates are good management practices.

The potential productivity for growing eastern white pine is high on areas of Monadnock soils. The potential productivity for growing red maple on areas of Sabattis soils is moderate. There are no major limitations to woodland management on areas of Monadnock soils. In areas of Sabattis soils, the seasonal high water table limits root growth resulting in potentially severe windthrow. Wet soil conditions permit rutting and soil compaction by heavy equipment to occur unless work proceeds during frozen ground conditions. Some seedling mortality can also be expected on areas of Sabattis soils.

The main limitation if this map unit is used as a site for dwellings is the seasonal high water table in areas of Sabattis soil. Areas of Monadnock soils are generally good sites for this use. On the other hand, areas of Sabattis soils should be avoided where possible to conserve wetland habitat.

The main limitation if this unit is used as a site for local roads and streets is the seasonal high water table in areas of Sabattis soils. Road designs should route road location and grades around these very poorly drained areas.

The main limitation if this unit is used as a site for septic tank absorption fields is the seasonal high water table in areas of Sabattis soils. Areas of Monadnock soils provide for generally good site conditions for this use.

The main limitations if this unit is used as a site for shallow excavations are the tendency for cutbanks to cave in for areas of Monadnock soils, and the seasonal high water table in areas of Sabattis soils. Mechanically supporting trench walls will help prevent the possibility of soil caving in on workers or other victims. Digging may be restricted to dry periods in areas of Sabattis soils. Sloughing of soil in the excavated area will also likely occur because of wetness.

The capability subclass is 6s.

655B—Sunapee-Monadnock complex, 3 to 15 percent slopes, very bouldery

This map unit consists of very deep, gently sloping and strongly sloping soils on sides of hills and undulating areas of glaciated uplands. The moderately well drained Sunapee soils are generally on foot slopes and other slightly concave to slightly convex landscapes. The well drained Monadnock soils are generally on knolls and other convex slopes. Boulders cover up to 3 percent of the surface of the unit. This map unit consists of about 50 percent Sunapee soils, 30 percent Monadnock soils, and 20 percent other soils. Sunapee and Monadnock soils are so intermingled that it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Sunapee soil are as follows—

Surface layer:
1 inch thick layer of leaves, moss and roots
0 to 3 inches, dark brown fine sandy loam

Subsurface layer:
3 to 7 inches, brown fine sandy loam

Subsoil:
7 to 10 inches, dark reddish brown fine sandy loam
10 to 19 inches, reddish brown and yellowish red fine sandy loam

19 to 25 inches, brown fine sandy loam with common mottles
25 to 39 inches, brown and dark yellowish brown fine sandy loam with common mottles

Substratum:
39 to 72 inches, brown gravelly fine sandy loam with common mottles

The typical sequence, depth, and composition of the layers of the Monadnock soil are as follows—
Surface layer:
2 inches thick layer of leaves, needles and roots
0 to 2 inches, dark grayish brown fine sandy loam

Subsoil:
2 to 4 inches, dark reddish brown very fine sandy loam
4 to 15 inches, dark brown fine sandy loam
15 to 27 inches, brown fine sandy loam
27 to 36 inches, dark yellowish brown fine sandy loam

Substratum:
36 to 48 inches, yellowish brown and dark yellowish brown loamy fine sand
48 to 72 inches, brown loamy fine sand

Included with these soils in mapping are about 10 percent somewhat poorly drained Adirondack soils and very poorly drained Sabattis soils on footslopes and along drainageways. About 5 percent of this unit consists of Becket and Skerry soils in areas having a dense substratum. Small areas of moderately deep Tunbridge soils are on ridge crests and adjacent to rock outcrops. Also included in this unit are small areas of moderately steep slopes. Small areas of Adams and Colton soils are included near streams and outwash plains. Included areas make up about 20 percent of this unit and range up to 40 acres each.

Soil Properties of the Sunapee soils—

Permeability: moderate in the mineral surface and subsoil, and moderate or moderately rapid in the substratum
Available water capacity (average for a 40-inch profile): moderate or high
Depth to seasonal high water table: 18 to 36 inches deep at some time from November through May
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Monadnock soils—

Permeability: moderate in the mineral surface and subsoil, and moderately rapid in the substratum
Available water capacity (average for a 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in woodland or brush

This unit is poorly suited to cultivated crops and hay. Surface boulders and stones obstruct cultivation and other equipment use. Erosion and subsequent loss of crop yields may be a management problem on long, strongly sloping areas of this unit. Boulder and stone removal, conservation tillage systems, and the use of cover crops are management practices to consider for areas of this unit.

This unit is poorly suited to pasture. Surface boulders and stones commonly obstruct proper management practices such as yearly mowing. Erosion may be a concern on the heavily traveled areas of this soil. Pastures should be managed to avoid overgrazing which can lead to significant sheet erosion and soil compaction. Rotational grazing and proper stocking rates are good management practices.

The potential productivity for growing sugar maple on areas of Sunapee soils is moderate. The potential productivity for growing eastern white pine on areas of Monadnock soils is high. There are no major limitations to woodland management.

The main limitation if this unit is used as a site for dwellings is the seasonal wetness in areas of Sunapee soils. Strongly sloping areas of this unit are a moderate limitation. Designing structures to conform to natural slope conditions will compensate for this limitation. Building sites may require some grading and landscaping expenses. Foundation drains and protective coatings on basement walls will alleviate wetness. Diversion ditches are also useful in controlling surface water around building sites.

Moderate limitations of this unit for local roads and streets are frost action, seasonal high water table in areas of Sunapee soils, and areas of strongly sloping terrain. Providing coarser grained subgrade material to frost depth is a way to reduce potential pavement damage due to frost action. Constructing on raised fill material and providing adequate drainage will help overcome wetness and frost action. Adapting road design by constructing along the contour of the land can diminish effects of slope limitation.

The main limitation if this unit is used as a site for septic tank absorption fields is the seasonal wetness in areas of Sunapee soils. Slope is a moderate limitation on strongly sloping areas of this unit. A specially designed septic tank absorption field should be considered for areas of Sunapee soils to avoid seepage problems and prolong the life of the system. Monadnock soils are generally well suited for this use.

The main limitations if this unit is used as a site for shallow excavations are the seasonal wetness in areas of Sunapee soils and the tendency for cutbanks to cave in for areas of Monadnock soils. Digging operations may be delayed unless drainage is installed in some areas. Mechanically supporting trench walls will lower the risk of soil caving in on workers or other possible victims.

The capability subclass is 6s.

661C—Hermon fine sandy loam, 3 to 15 percent slopes, very bouldery

This map unit consists of very deep, gently sloping and strongly sloping, somewhat excessively drained soils. These soils formed in sandy and gravelly glacial drift on upland hillsides and valley margins. Boulders cover up to 3 percent of the surface of this unit.

The typical sequence, depth, and composition of the layers of Hermon soil are as follows—

Surface layer:
3 inches thick layer of undecomposed leaves and needles
0 to 2 inches, black fine sandy loam

Subsurface layer:
2 to 6 inches, reddish gray fine sandy loam

Subsoil:
6 to 10 inches, dark brown fine sandy loam
10 to 28 inches, strong brown very gravelly loamy sand
28 to 37 inches, dark yellowish brown very cobbly loamy sand

Substratum:
37 to 54 inches, brown very cobbly loamy sand
54 to 72 inches, brown cobbly loamy sand

Included with this soil in mapping are about 5 percent Colton soils in water sorted deposits along streams and on valley walls. About 5 percent of this unit consists of Fernlake soils in deposits of glacial drift having less gravel and cobbles. Another 5 percent of this unit are small areas similar to Colosse soils where the texture is loamy instead of sandy. Included are small areas of loamy Becket, Monadnock, and Sunapee soils having fewer gravel and cobbles. Also included are moderately well drained and somewhat poorly drained soils on footslopes, in concave areas between knolls and along drainageways. Included areas make up about 20 percent of this unit and range up to 40 acres each.

Soil Properties—

Permeability: moderately rapid or rapid in the mineral surface and subsoil, and rapid in the substratum
Available water capacity (average for a 40-inch profile): low or moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to 30 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this map unit are in woodland.

This unit is poorly suited to growing cultivated crops and hay. Surface boulders and stones inhibit efficient use of farm machinery and cause serious wear and tear on equipment. Boulder and stone removal, conservation tillage systems, crop rotation, and the use of cover crops are good management practices.

This unit is poorly suited to pasture. Surface stones and boulders inhibit yearly mowing and other maintenance practices. Erosion can be a significant problem on strongly sloping heavily grazed areas of this unit. Avoiding overgrazing will help reduce soil erosion and encourage key pasture species. Rotational grazing and proper stocking rates are good pasture management practices.

The potential productivity for growing eastern white pine on this unit is high. Surface boulders and stones may moderately interfere with efficient equipment operation. Seedlings may not survive or grow well during droughty periods because of low available water capacity. Planting when the soil is moist and selecting species that are tolerant to dry soil conditions will help improve the rate of seedling survival.

The main limitations if this unit is used as a site for dwellings are the presence of boulders and areas of strongly sloping terrain. Excavation and removal of boulders may increase the cost of site preparation. Building on gently sloping areas of this unit will be cheaper than on the more sloping areas. Designing structures to conform with natural slope conditions and land shaping around basements are ways to overcome limitations of strongly sloping areas.

Moderate limitations of this soil for local roads and streets are the strongly sloping topography and the presence of large stones below the surface. New roads should be routed along the contour of the land where possible to reduce grading and smoothing costs. The presence of large stones in this soil will also increase construction costs in some areas.

The main limitation if this unit is used as a site for septic tank absorption fields is its rapid permeability. If used for septic disposal, this soil may improperly filter effluent posing a risk of ground water contamination. An alternate system should be considered. Inclusions or nearby units of Monadnock or Fernlake soils generally perform better for this use.

The main limitation if this unit is used as a site for shallow excavations is the tendency for side walls to cave in. Mechanically supporting trench walls will reduce the possibility of soil caving in on workers or other victims.

The capability subclass is 6s.

661D—Hermon fine sandy loam, 15 to 35 percent slopes, very bouldery

This map unit consists of very deep, moderately steep and steep, somewhat excessively drained soils. These soils formed in sandy and gravelly glacial drift on upland hillsides and valley margins. Boulders cover up to 3 percent of the surface of this unit.

The typical sequence, depth, and composition of the layers of Hermon soil are as follows—

Surface layer:
3 inches thick layer of undecomposed leaves and needles
0 to 2 inches, black fine sandy loam

Subsurface layer:
2 to 6 inches, reddish gray fine sandy loam

Subsoil:
6 to 10 inches, dark brown fine sandy loam
10 to 28 inches, strong brown very gravelly loamy sand
28 to 37 inches, dark yellowish brown very cobbly loamy sand

Substratum:
37 to 54 inches, brown very cobbly loamy sand
54 to 72 inches, brown cobbly loamy sand

Included with this soil in mapping are about 5 percent Colton soils in water sorted deposits along streams and on valley walls. About 5 percent of this unit consists of Fernlake soils in deposits of glacial drift having less gravel and cobbles. Another 5 percent of this unit includes small areas similar to Colosse soils where the texture is loamy instead of sandy.Included are small areas of loamy Becket and Monadnock soils having fewer gravel and cobbles. Also included are moderately well drained soils on footslopes, in concave areas between ridges and along drainageways. Included areas make up about 20 percent of this unit and range up to 40 acres each.

Soil Properties—

Permeability: moderately rapid or rapid in the mineral surface and subsoil, and rapid in the substratum
Available water capacity (average for a 40-inch profile): low or moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to 30 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in woodland.

This unit is poorly suited to growing cultivated crops and hay. Surface boulders and stones inhibit efficient use of farm machinery and cause serious wear and tear on equipment. Steep slopes also limit use of farm machinery. If this unit is cultivated, erosion can be a serious management problem.

This unit is poorly suited to pasture. Surface boulders and stones and steep slopes inhibit yearly mowing and other maintenance practices. Erosion can be a significant

problem on heavily grazed areas of this unit. By avoiding overgrazing, managers can help reduce soil erosion and encourage key pasture species. Boulder and stone removal, rotational grazing, and proper stocking rates are good pasture management practices.

The potential productivity for growing eastern white pine on Hermon soils is high. Erosion is a moderate hazard in areas of logging operations. Placing logging roads and skid trails on the contour will help control erosion and avoid loss of soil productivity. Steep slopes and surface boulders are moderate operational limitations to equipment use. Seedlings may not survive or grow well during droughty periods because of low available water capacity. Planting when the soil is moist and selecting species that are tolerant of dry soil conditions will help improve the rate of seedling survival.

The main limitations if this unit is used as a site for dwellings are the moderately steep and steep slopes. Designing structures to conform with natural slope and shaping the land are ways to overcome slope limitations. Excavation and removal of boulders may also increase the cost of preparing building sites.

The main limitation if this soil is used as a site for local roads and streets is the moderately steep topography. New roads should be routed along the contour of the land where possible to reduce grading and smoothing costs. The presence of large stones in this soil may also increase construction costs in some areas.

The main limitations if this unit is used as a site for septic tank absorption fields are slope and the rapid permeability. Better suited sites such as inclusions or nearby areas of gently sloping Monadnock or Fernlake soils will likely perform better for this use. Because of the porous nature of these soils, there is a risk of ground water contamination or downslope seepage if a septic system is installed on this unit.

The main limitations if this unit is used as a site for shallow excavations are slope and the tendency for side walls to cave in. Routing excavations around these moderately steep and steep areas will probably be less costly. Use of heavy equipment can be difficult and dangerous on steep slopes. Mechanically supporting trench walls will reduce the possibility of soil caving in on workers or other victims.

The capability subclass is 7s.

708B—Adirondack-Sabattis-Tughill complex, 0 to 8 percent slopes, very bouldery

This map unit consists of very deep, nearly level and gently sloping soils on upland glacial till plains. The somewhat poorly drained Adirondack soils are on slightly convex parts of undulating plains. Very poorly drained Sabattis soils are in slight depressions. The very poorly drained Tughill soils occur near drainageways and in swales between knolls. Boulders cover up to 3 percent of the surface of this unit. This map unit consists of about 40 percent Adirondack soils, 25 percent Sabattis soils, 20 percent Tughill soils, and 15 percent other soils. Adirondack, Sabattis and Tughill soils are so intermingled that it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Adirondack soil are as follows—

Surface layer:
0 to 5 inches, dark brown loam

Subsoil:
5 to 12 inches, brown loam with few mottles
12 to 18 inches, brown fine sandy loam with common mottles
18 to 22 inches, light brownish gray gravelly fine sandy loam with common mottles

Substratum:
22 to 72 inches, firm, brown gravelly fine sandy loam with few mottles

The typical sequence, depth and composition of the layers of the Sabattis soil are as follows—

Surface layer:
0 to 8 inches, black muck
8 to 11 inches, very dark grayish brown and very dark brown fine sandy loam.

Subsoil:
11 to 19 inches, grayish brown cobbly sandy loam with many mottles
19 to 26 inches, grayish brown gravelly fine sandy loam with many mottles

Substratum:
26 to 39 inches, light brownish gray gravelly fine sandy loam with common mottles
39 to 72 inches, brown fine sandy loam with few mottles

The typical sequence, depth, and composition of the layers of the Tughill soil are as follows—

Surface layer:
0 to 3 inches, black mucky peat
3 to 7 inches, black muck
7 to 13 inches, black cobbly fine sandy loam

Subsoil:
13 to 19 inches, very dark gray very gravelly sandy loam
19 to 29 inches, dark greenish gray very gravelly fine sandy loam with common organic stains
29 to 37 inches, dark grayish brown very gravelly fine sandy loam with many mottles

Substratum:
37 to 72 inches, dark grayish brown very gravelly sandy loam with few mottles

Included with this unit in mapping are about 5 percent moderately well drained Skerry and Sunapee soils on slightly more convex areas of the landscape. Small areas of soils similar to moderately deep Tunbridge and Chazy soils are included. Along some drainageways and in depressions are inclusions of Beseman, Wonsqueak or Loxley soils where organic deposits have accumulated. Also included are small areas similar to Hermon soils, but moderately well or somewhat poorly drained. Included areas make up about 15 percent of this unit and range up to 40 acres each.

Soil Properties of the Adirondack soils—

Permeability: moderate in the mineral surface and subsoil, and slow in the substratum
Available water capacity (average for a 40-inch profile): moderate
Depth to seasonal high water table: 12 to 18 inches deep at some time from November through May
Root zone: mostly to 20 inches deep or less
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Sabattis soils—

Permeability: moderately slow to moderately rapid in the organic mantle, moderate or moderately rapid in the mineral subsurface and subsoil, and moderately slow in the substratum
Available water capacity (average for a 40-inch profile): high
Depth to seasonal high water table: at the surface to 12 inches below the surface at some time from November through May

Root zone: mainly to 14 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Tughill soils—

Permeability: moderately slow to moderately rapid in the organic mantle, moderate in the mineral surface or subsurface, moderately slow in the subsoil, and moderately slow or slow in the substratum
Available water capacity (average for a 40-inch profile): moderate
Depth to seasonal high water table: 12 inches above the surface to 6 inches deep at some time from November through June
Root zone: mainly to 6 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland.

This unit is poorly suited to cultivated crops and hay. Surface boulders, stones and the seasonal high water table restrict cultivation and other equipment use. Drainage outlets may be hard to establish without jeopardizing important wetland habitat. Removing stones and boulders, using a conservation tillage system, and growing cover crops are good management practices for existing farmland.

This unit is poorly suited to pasture. Surface boulders and stones make the proper management of forage difficult. Soil compaction is a concern on the heavily traveled areas of this unit. Avoiding excessive grazing and practicing deferred grazing when soil conditions are wet will help prevent significant compaction. Key pasture species will also suffer from weed competition if grazing is left unchecked. Rotational grazing and proper stocking rates are good management practices.

The potential productivity for growing balsam fir is high on areas of Adirondack soils. The potential productivity for growing red maple is moderate on areas of Sabattis and Tughill soils. The seasonal high water table will cause soft ground conditions for heavy equipment use, leading to deep ruts and soil erosion. Logging during relatively dry periods or during frozen ground conditions will alleviate these problems. Root growth is severely restricted by seasonal wetness in areas of Sabattis and Tughill soils. Restricted rooting depth increases windthrow potential. Minimal thinning and promoting water tolerant species will help overcome this limitation.

The main limitation of this unit for dwellings is the seasonal high water table. A better drained inclusion or nearby soil should be considered for this use. Protective coatings on basement walls, installing foundation drains, and diverting surface water away from dwellings are ways to help overcome this limitation.

The main limitations if this unit is used as a site for local roads and streets are the seasonal high water table and frost action. Providing coarse grained subgrade material to frost depth is a way to reduce the potential for pavement damage due to frost action. Adequate drainage will alleviate some of the wetness problem in areas of this map unit.

The main limitations if this unit is used as a site for septic tank absorption fields are the slow percolation rate and the seasonal high water table. Better suited sites such as Monadnock soils should be considered to reduce costs and increase system performance. Conventional systems will perform poorly in most areas of this unit. An alternate system or specially designed septic tank absorption field needs to be planned for this soil to avoid seepage problems and prolong the life of the system.

The main limitations if this unit is for shallow excavations are the seasonal wetness and the tendency for cutbanks to cave in. Limiting excavations to drier periods will help overcome the wetness limitation. Trench walls should be adequately supported to prevent cutbanks from caving in on workers or other possible victims.

The capability subclass is 6s.

721C—Becket-Tunbridge-Skerry complex, 3 to 15 percent slopes, very bouldery

This map unit consists of gently sloping and strongly sloping soils on the tops and sides of hills in glaciated uplands. The very deep, well drained Becket soils are generally on side slopes. The moderately deep, well drained Tunbridge soils are generally on higher areas of the landscape near bedrock outcrops and ledges. The very deep, moderately well drained Skerry soils are generally on footslopes and between ridges. Boulders cover up to 3 percent of the ground surface. This map unit consists of about 40 percent Becket soils, 25 percent Tunbridge soils, 20 percent Skerry soils, and 15 percent other soils. Becket, Tunbridge, and Skerry soils are so intermingled that it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Becket soil are as follows—

Surface layer:
1 inch thick layer of undecomposed roots and leaves
0 to 3 inches, very dark gray fine sandy loam

Subsurface layer:
3 to 4 inches, grayish brown fine sandy loam

Subsoil:
4 to 9 inches, dark reddish brown sandy loam
9 to 16 inches, reddish brown sandy loam
16 to 23 inches, dark yellowish brown sandy loam

Substratum:
23 to 33 inches, firm, dark yellowish brown gravelly fine sandy loam with loamy fine sand lenses
33 to 72 inches, firm, dark yellowish brown cobbly fine sandy loam with loamy fine sand lenses

The typical sequence, depth, and composition of the layers of the Tunbridge soil are as follows—

Surface layer:
0 to 1 inch, very dark brown fine sandy loam
1 to 4 inches, reddish brown fine sandy loam

Subsoil:
4 to 9 inches, reddish brown gravelly loam
9 to 16 inches, yellowish red loam
16 to 26 inches, brown gravelly fine sandy loam
26 inches, crystalline bedrock

The typical sequence, depth, and composition of the layers of the Skerry soil are as follows—

Surface layer:
1 inch thick layer of undecomposed leaf litter
0 to 3 inches, black fine sandy loam

Subsurface layer:
3 to 5 inches, reddish gray fine sandy loam

Subsoil:
5 to 16 inches, dark reddish brown fine sandy loam
16 to 21 inches, dark brown fine sandy loam
21 to 24 inches, brown gravelly sandy loam with common mottles

Substratum: 24 to 72 inches, very firm, brown gravelly sandy loam

Included with this unit in mapping are about 5 percent somewhat poorly drained Adirondack soils and very poorly drained Sabattis soils on footslopes and along drainageways. About 5 percent of this unit consists of well drained Monadnock soils in very deep areas lacking a dense substratum. Small areas of shallow Lyman soils are on ridge crests and adjacent to rock outcrops. Also included in this unit are small areas of soil with bedrock at 40 to 60 inches deep, and small areas on moderately steep slopes. Included areas make up about 15 percent of this unit and range up to 40 acres each.

Soil Properties of the Becket soils—

Permeability: moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for a 40-inch profile): low
Depth to seasonal high water table: perched 24 to 42 inches deep at some time during March and April
Root zone: up to 30 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Tunbridge soils—

Permeability: moderate or moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally to depth of bedrock
Shrink swell potential: low
Depth to bedrock: 20 to 40 inches

Soil Properties of the Skerry soils—

Permeability: moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for a 40-inch profile): low
Depth to seasonal high water table: perched 18 to 30 inches deep at some time from November through May
Root zone: usually restricted to 20 inches deep or to the depth of the very firm substratum
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this map unit are used as woodland or brush.

This unit is poorly suited to cultivated crops and hay. Surface boulders and stones obstruct cultivation and other equipment use. Soil erosion and subsequent loss of crop production is a potential problem where vegetation is removed or disturbed. Strongly sloping areas of this unit sometimes occur in complex patterns making application of some conservation practices more difficult. Removing stones and boulders, applying a conservation tillage system, using crop rotation and growing cover crops are good management practices.

This unit is poorly suited to pasture. Surface boulders and stones are obstacles to proper management such as yearly mowing. Soil compaction and erosion can occur on the heavily traveled areas of this unit. Avoiding overgrazing and practicing deferred grazing in areas of Skerry soils will help prevent significant compaction. Key pasture species will also be adversely affected by weed competition if grazing is poorly managed. Rotational grazing and proper stocking rates are good management practices.

The potential productivity for growing sugar maple on this unit is moderate. Root growth is moderately restricted by the seasonal wetness in Becket and Skerry soils and by depth to bedrock in Tunbridge soils. Restricted rooting depth increases windthrow potential. Minimal thinning and careful selection of species will help overcome this limitation.

The main limitations if this unit is used as a site for dwellings are the seasonal high water table especially in areas of Skerry soils and the depth to bedrock in areas of Tunbridge soils. Protective coatings on basement walls, foundation drains and diverting surface water away from dwellings will alleviate wetness. Building sites will require some grading and landscaping expenses particularly in strongly sloping areas of this unit. However, this land shaping may be restricted in bedrock-controlled areas associated with Tunbridge soils. Designing structures to conform to the natural terrain will help compensate for depth to rock and slope.

The main limitations if this unit is used as a site for local roads and streets are frost action, the depth to rock in areas of Tunbridge soils, and its strongly sloping areas. Providing coarser grained subgrade material to frost depth is a way to reduce potential frost action. Constructing roads along the contour of the land will help overcome slope limitations. Grading and smoothing may be more limited in areas of moderately deep Tunbridge soils.

The main limitations if this unit is used as a site for septic tank absorption fields are the slow percolation rate in areas of Becket and Skerry soils, the seasonal high water table in areas of Skerry soils, and the moderate depth to bedrock in areas of Tunbridge soils. A better suited site should be considered for this use such as nearby Monadnock soils. Conventional septic system designs may perform poorly on areas of this unit. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitations if this unit is used as a site for shallow excavations are the depth to bedrock in areas of Tunbridge soils and the seasonal high water table in areas of Skerry soils. Excavations in areas of Tunbridge soils may require blasting. In areas of Skerry soils, wet conditions may delay digging operations during the spring.

The capability subclass is 6s.

721D—Becket-Tunbridge complex, 15 to 35 percent slopes, very bouldery

This map unit consists of well drained, moderately steep and steep soils on the sides of hills and ridges of glaciated uplands. The very deep Becket soils are generally on side slopes. The moderately deep Tunbridge soils are generally on upper convex slopes near bedrock outcrops and ridges. Boulders cover up to 3 percent of the ground surface. This map unit consists of about 50 percent Becket soils, 30 percent Tunbridge soils, and 20 percent other soils. Becket and Tunbridge soils are so intermingled that it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Becket soil are as follows—

Surface layer:
1 inch thick layer of undecomposed roots and leaves
0 to 3 inches, very dark gray fine sandy loam

Subsurface layer:
3 to 4 inches, grayish brown fine sandy loam

Subsoil:
4 to 9 inches, dark reddish brown sandy loam
9 to 16 inches, reddish brown sandy loam
16 to 23 inches, dark yellowish brown sandy loam

Substratum:
23 to 33 inches, firm, dark yellowish brown gravelly fine sandy loam with loamy fine sand lenses
33 to 72 inches, firm, dark yellowish brown cobbly fine sandy loam with loamy fine sand lenses

The typical sequence, depth, and composition of the layers of the Tunbridge soil are as follows—
Surface layer:
0 to 1 inch, very dark brown fine sandy loam
1 to 4 inches, reddish brown fine sandy loam

Subsoil:
4 to 9 inches, reddish brown gravelly loam
9 to 16 inches, yellowish red loam
16 to 26 inches, brown gravelly fine sandy loam
26 inches, crystalline bedrock

Included with this unit in mapping are about 5 percent moderately well drained Skerry soils on footslopes and along drainageways. Shallow Lyman soils are on ridge crests and adjacent to rock outcrops and make up about 5 percent of this unit. About 5 percent of this unit consists of Monadnock soils in very deep areas lacking a dense substratum. Also included in this unit are small areas of soil where bedrock is 40 to 60 inches deep and small inclusions of very steep areas. Included areas make up about 20 percent of this unit and range up to 40 acres each.

Soil Properties of the Becket soils—

Permeability: moderate in the mineral surface and subsoil and moderately slow or slow in the substratum
Available water capacity (average for a 40-inch profile): low
Depth to seasonal high water table: perched 24 to 42 inches deep at some time during March and April
Root zone: up to 30 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Tunbridge soils—

Permeability: moderate or moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Shrink swell potential: low
Depth to bedrock: 20 to 40 inches

Most areas of this soil are in woodland.

This unit is poorly suited to cultivated crops and hay. Steep slopes and surface boulders seriously restrict cultivation and other equipment use. Erosion and subsequent loss of soil productivity are likely in areas where vegetation is removed or disturbed.

This unit is poorly suited to pasture. Steep slopes and surface boulders make the proper management of forage difficult. Erosion is a serious concern on the heavily traveled areas of these soils. Rotational grazing and proper stocking rates are important management practices for conserving topsoil.

The potential productivity for growing sugar maple is moderate. Soil erosion can be a problem where vegetation is removed. Logging roads should be routed along the contour to control erosion by water. Steep slopes can moderately limit maneuverability and safe use of equipment. Also, root growth is moderately restricted

by the dense substratum in areas of Becket soils and the depth to bedrock in areas of Tunbridge soils. Thinning operations should be kept to a minimum to avoid potential windthrow caused by restricted rooting depth.

The main limitations if this unit is used as a site for dwellings are moderately steep and steep slopes, and the moderate depth to bedrock in areas of Tunbridge soils. Building sites may require significant grading and landscaping. However, shaping of the land may be limited by depth to bedrock in some areas of this unit. Designing structures to conform to the natural terrain will help compensate for slope limitation and depth to rock. Inclusions or nearby soils with less slope may be better suited to this use.

The main limitation if this unit is used as a site for local roads and streets is the moderately steep or steep slopes. Adapting road design to the terrain and constructing roads along the contour are ways to alleviate this limitation.

The main limitations if this unit is used as a site for septic tank absorption fields are slope, the slow percolation rate in areas of Becket soils, and the moderate depth to bedrock in areas of Tunbridge soils. A better suited site should be considered for this use such as less sloping areas of Monadnock or Fernlake soils. Conventional septic system designs will perform poorly on most areas of this unit. Alternative systems that augment the filtering capacity of this system should be considered.

The main limitations if this unit is used as a site for shallow excavations are slope and the depth to bedrock in areas of Tunbridge soils. Maneuvering equipment around these moderately steep and steep slopes will be troublesome and unsafe in many areas. Excavations may require blasting in areas of Tunbridge soils. Selecting areas with deeper, less sloping soils will reduce costs and facilitate excavations.

The capability subclass is 7s.

723C—Becket fine sandy loam, 3 to 15 percent slopes, very bouldery

This map unit consists of very deep, gently sloping and strongly sloping, well drained soils on the sides of hills and ridges in glaciated uplands. Boulders cover up to 3 percent of the soil surface.

The typical sequence, depth, and composition of the layers of Becket soil are as follows—

Surface layer:
1 inch thick layer of undecomposed roots and leaves
0 to 3 inches, very dark gray fine sandy loam

Subsurface layer:
3 to 4 inches, grayish brown fine sandy loam

Subsoil:
4 to 9 inches, dark reddish brown sandy loam
9 to 16 inches, reddish brown sandy loam
16 to 23 inches, dark yellowish brown sandy loam

Substratum:
23 to 33 inches, firm, dark yellowish brown gravelly fine sandy loam with loamy fine sand lenses
33 to 72 inches, firm, dark yellowish brown cobbly fine sandy loam with loamy fine sand lenses

Included with this soil in mapping are about 10 percent moderately well drained Skerry soils on slightly concave areas and footslopes. About 5 percent of this unit consists of moderately deep Tunbridge soils on high areas of the map unit and near rock outcrops. Also included are Monadnock soils having a substratum that is less

dense. Small areas of somewhat poorly drained Adirondack soils and very poorly drained Sabattis soils are along drainageways and seep spots. Included areas make up about 20 percent of this unit and range up to 40 acres each.

Soil Properties—

Permeability: moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for a 40-inch profile): low
Depth to seasonal high water table: perched 24 to 42 inches deep at some time during March and April
Root zone: up to 30 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in woodland or brush.

This unit is poorly suited to growing cultivated crops and hay. Surface boulders and stones obstruct efficient use of farm machinery and cause serious wear and tear on equipment. Soil erosion and subsequent loss of fertility is a potential problem on long cultivated slopes. Boulder and stone removal, conservation tillage systems, crop rotation and use of cover crops are good management practices.

This unit is poorly suited to pasture. Surface boulders and stones make proper management of forage difficult. Erosion is a concern on the heavily traveled areas of this soil. Avoiding excessive grazing will help prevent significant sheet erosion and soil compaction so as to maintain key forage species. Rotational grazing and proper stocking rates are good management practices.

The potential productivity for growing sugar maple is moderate. Root growth is moderately restricted by the seasonal high water table and the dense substratum. Therefore, some risk of windthrow exists in areas of this unit. Thinning practices should be kept to a minimum where possible.

The main limitations if this unit is used as a site for dwellings are seasonal high water table and slope. Areas of strongly sloping terrain will require some grading and landscaping expenses. If this map unit is used, foundation drains and protective coatings on basement walls will alleviate seepage.

The main limitations of this unit for local roads and streets are frost action and slope. Providing coarser grained subgrade material to frost depth is a way to reduce potential pavement damage due to frost action. Adapting road design by constructing along the contour can lessen slope limitations.

The main limitation if this unit is used as a site for septic tank absorption fields is slow permeability in the substratum. An alternate system or specially designed absorption field should be considered to avoid seepage problems and prolong its use.

Moderate limitations of this unit for shallow excavations are the seasonal high water table, areas of strongly sloping terrain and the dense substratum. Digging operations during very wet periods may be briefly delayed unless drainage is installed. Digging after prolonged dry periods however, can be very difficult because the substratum becomes very hard. Maneuvering equipment for digging can pose some safety risk on strongly sloping areas of this unit.

The capability subclass is 6s.

723D—Becket fine sandy loam, 15 to 35 percent slopes, very bouldery

This map unit consists of very deep, moderately steep and steep, well drained soils on the sides of mountains and ridges on glaciated uplands. Boulders cover up to 3 percent of the soil surface.

The typical sequence, depth, and composition of the layers of Becket soil are as follows—

Surface layer:
1 inch thick layer of undecomposed roots and leaves
0 to 3 inches, very dark gray fine sandy loam

Subsurface layer:
3 to 4 inches, grayish brown fine sandy loam

Subsoil:
4 to 9 inches, dark reddish brown sandy loam
9 to 16 inches, reddish brown sandy loam
16 to 23 inches, dark yellowish brown sandy loam

Substratum:
23 to 33 inches, firm, dark yellowish brown gravelly fine sandy loam with loamy fine sand lenses
33 to 72 inches, firm, yellowish brown cobbly fine sandy loam with loamy fine sand lenses

Included with this soil in mapping are about 5 percent moderately well drained Skerry soils on foot slopes and on slightly concave areas. About 5 percent of this unit consists of Monadnock soils having a substratum that is less dense. Included are about 5 percent moderately deep Tunbridge soils on high convex positions. Also in this unit are small areas of somewhat poorly drained Adirondack soils along drainageways and seep areas, and small areas that are strongly sloping. Included areas make up about 20 percent of this unit and range up to 40 acres each.

Soil Properties—

Permeability: moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for a 40-inch profile): low
Depth to seasonal high water table: perched 24 to 42 inches deep at some time during March and April.
Root zone: up to 30 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are used as woodland or brush.

This unit is poorly suited to cultivated crops and hay. The steep slopes and many surface boulders restrict cultivation and other equipment use. Erosion and subsequent loss of soil productivity is a serious hazard where vegetation is removed or disturbed. Boulder and stone removal and use of cover crops are important management practices to help reduce topsoil erosion.

This unit is poorly suited to pasture. Surface boulders and stones as well as steep slopes inhibit yearly mowing and other maintenance practices. Erosion can be a significant management problem on heavily grazed areas of this soil. Maintaining vegetation is essential for preventing significant loss of topsoil and forage production in these areas. Boulder and stone removal, rotational grazing and proper stocking rates are good pasture management practices.

The potential productivity for growing sugar maple is moderate. Erosion can be a moderate problem on logging roads and other areas where vegetation is removed. Minimal thinning and routing logging roads along the contour will help reduce soil erosion. Steep slopes can moderately limit maneuverability and safe use of equipment. Root growth is restricted by the seasonal high water table and the dense substratum. Therefore, a moderate risk of windthrow exists in areas of this unit.

The main limitation if this unit is used as a site for dwellings is the moderately steep and steep slopes. Inclusions or nearby soils with less slope may be better suited to this use. Building sites will require more grading and landscaping expenses than less sloping areas of Becket soils. Designing structures to conform to the natural terrain will help to compensate for slope.

The main limitation if this unit is used as a site for local roads and streets is the steep slope. Adapting road design to the terrain by constructing along the contour can help to overcome this limitation.

The main limitations if this unit is used as a site for septic tank absorption fields are slope and the slow permeability in the substratum. A better suited site should be considered for this use. Installing the system on better suited inclusions or nearby soils such as Monadnock soils will reduce costs and increase operating efficiency. An alternate system or specially designed septic tank absorption field should be planned for this soil to avoid seepage problems and prolong its use.

The main limitation if this unit is used as a site for shallow excavations is the moderately steep and steep slopes. Maneuvering equipment for digging will be difficult and very risky at times.

The capability subclass is 7s.

725B—Skerry-Becket complex, 3 to 15 percent slopes, very bouldery

This map unit consists of very deep, gently sloping and strongly sloping soils on the tops and sides of knolls and ridges in glaciated uplands. Moderately well drained Skerry soils are generally on foot slopes and other slightly concave positions. Well drained Becket soils are generally on knolls and other convex slopes. Boulders cover up to 3 percent of the ground surface. This map unit consists of about 50 percent Skerry soils, 30 percent Becket soils, and 20 percent other soils. Skerry and Becket soils are so intermingled that it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Skerry soil are as follows—

Surface layer:
1 inch thick layer of undecomposed leaf litter
0 to 3 inches, black fine sandy loam.

Subsurface layer:
3 to 5 inches, reddish gray fine sandy loam

Subsoil:
5 to 16 inches, dark reddish brown fine sandy loam
16 to 21 inches, dark brown fine sandy loam
21 to 24 inches, brown gravelly sandy loam with common mottles

Substratum:
24 to 72 inches, very firm, brown gravelly sandy loam

The typical sequence, depth, and composition of the layers of the Becket soil are as follows—

Surface layer:
1 inch thick layer of undecomposed leaves and roots
0 to 3 inches, very dark gray fine sandy loam

Subsurface layer:
3 to 4 inches, grayish brown fine sandy loam

Subsoil:
4 to 9 inches, dark reddish brown sandy loam
9 to 16 inches, reddish brown sandy loam
16 to 23 inches, dark yellowish brown sandy loam

Substratum:
23 to 33 inches, firm, dark yellowish brown gravelly fine sandy loam with loamy fine sand lenses
33 to 72 inches, firm, dark yellowish brown cobbly fine sandy loam with loamy fine sand lenses

Included with this unit in mapping are about 10 percent somewhat poorly drained Adirondack soils and very poorly drained Sabattis soils on toeslopes and along drainageways. About 5 percent of this unit consists of Monadnock and Sunapee soils in areas lacking a dense substratum. Small areas of moderately deep Tunbridge soils are on ridge crests and adjacent to rock outcrops. Also included in this unit are small areas of Becket soils on moderately steep slopes. Included areas make up about 20 percent of this unit and range up to 40 acres each.

Soil Properties of the Skerry soils—

Permeability: moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for a 40-inch profile): low
Depth to seasonal high water table: perched 18 to 30 inches deep at some time from November through May
Root zone: usually restricted to 20 inches deep or to the depth of the very firm substratum
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Becket soils—

Permeability: moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for a 40-inch profile): low
Depth to seasonal high water table: perched 24 to 42 inches deep at some time during March and April.
Root zone: up to 30 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in woodland or brush.

This unit is poorly suited to cultivated crops and hay. Surface boulders and stones obstruct efficient use of farm machinery and cause serious wear and tear on equipment. In areas of Skerry soils, the seasonal high water table may delay planting in the spring. Soil erosion and subsequent loss of fertility is a potential problem on long cultivated slopes. Boulder and stone removal, conservation tillage systems, crop rotation and use of cover crops are good management practices.

This unit is poorly suited to pasture. Surface boulders and stones make proper management of forage difficult. Erosion may occur on the heavily traveled areas of this unit. Avoiding excessive grazing and implementing deferred grazing in the spring will help prevent significant sheet erosion and soil compaction. Rotational grazing and proper stocking rates are good management practices.

The potential productivity for growing sugar maple on this unit is moderate. Root growth is restricted by the seasonal high water table and the dense substratum. Therefore, windthrow can be a moderate problem in areas of Skerry soils and on

Adirondack soil inclusions. Thinning practices should be kept to a minimum where possible.

The main limitation if this unit is used as a site for dwellings is the seasonal high water table. Strongly sloping areas are moderately limiting because building sites will require some grading and landscaping expenses. Protective coatings on basement walls, foundation drains, and diversion ditches to control surface water can be used to alleviate seasonal wetness. Also, designing structures to conform to the natural terrain will help compensate for strongly sloping areas.

The main limitation if this unit is used as a site for local roads and streets is frost action. Strongly sloping terrain is a moderate limitation on some areas of the unit. Providing coarser grained subgrade material to frost depth is a way to reduce potential pavement damage caused by frost action. Constructing roads along the contour in strongly sloping areas may help to overcome slope limitations.

The main limitations if this unit is used as a site for septic tank absorption fields are slow permeability in the substratum and the seasonal high water table in areas of Skerry soils. A better suited site should be considered such as on areas of Monadnock soils. Conventional septic system designs may perform poorly on areas of this unit. Alternative systems that augment the filtering capacity of this system should be considered.

The main limitation if this unit is used as a site for shallow excavations is the seasonal high water table in areas of Skerry soils. Areas of Becket soils are also limited by seasonal wetness for brief periods. Installing drainage or performing work during dry periods are ways to overcome this limitation.

The capability subclass is 6s.

727B—Skerry-Adirondack complex, 0 to 8 percent slopes, very bouldery

This map unit consists of very deep, nearly level and gently sloping soils on footslopes and undulating areas of upland glacial till plains. Moderately well drained Skerry soils are generally on slightly convex slopes and footslopes. The somewhat poorly drained Adirondack soils are generally on toeslopes and other slightly concave positions. Boulders cover up to 3 percent of the ground surface. This map unit consists of about 50 percent Skerry soils, 30 percent Adirondack soils, and 20 percent other soils. Skerry and Adirondack soils are so intermingled it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Skerry soil are as follows—

Surface layer:
1 inch thick layer of undecomposed leaf litter
0 to 3 inches, black fine sandy loam

Subsurface layer:
3 to 5 inches, reddish gray fine sandy loam

Subsoil:
5 to 16 inches, dark reddish brown fine sandy loam
16 to 21 inches, dark brown fine sandy loam
21 to 24 inches, brown gravelly sandy loam with common mottles

Substratum:
24 to 72 inches, very firm, brown gravelly sandy loam

The typical sequence, depth, and composition of the layers of the Adirondack soil are as follows—

Surface layer:
0 to 5 inches, dark brown loam

Subsoil:
5 to 12 inches, brown loam with few mottles
12 to 18 inches, brown fine sandy loam with common mottles
18 to 22 inches, light brownish gray gravelly fine sandy loam with common mottles

Substratum:
22 to 72 inches, firm, brown gravelly fine sandy loam with few mottles

Included with this unit in mapping are about 10 percent moderately well drained Sunapee soils and somewhat poorly drained Peasleeville soils in areas lacking a dense substratum. About 5 percent of this unit consists of very poorly drained Sabattis soils in seeps and along drainageways. Included are Becket soils on knolls and strongly sloping areas. Also, small areas of non-stony and extremely bouldery spots occur. Included areas make up about 20 percent of this unit and range up to 40 acres each.

Soil Properties of the Skerry soils—

Permeability: moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for a 40-inch profile): low
Depth to seasonal high water table: perched 18 to 30 inches deep at some time from November through May
Root zone: usually restricted to 20 inches deep or to the depth of the very firm substratum
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Adirondack soils—

Permeability: moderate in the mineral surface and subsoil, and slow in the substratum
Available water capacity (average for a 40-inch profile): moderate
Depth to seasonal high water table: perched 12 to 18 inches deep at some time from November through May.
Root zone: mainly to 20 inches deep or less
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in woodland or brush.

This unit is poorly suited to cultivated crops and hay. Surface boulders and stones obstruct cultivation and other equipment use. The seasonal high water table may cause significant delays in planting or harvest. Surface and subsurface drainage can alleviate wet soil conditions. Boulder and stone removal, conservation tillage systems and use of cover crops are good management practices.

This unit is poorly suited to pasture. Surface boulders and stones are obstacles to proper management such as yearly mowing. Soil compaction can occur under wet soil conditions on the heavily traveled areas of this unit. Avoiding excessive grazing and practicing deferred grazing will help prevent significant compaction. Key pasture species will also be adversely affected by weed competition if grazing is poorly managed. Rotational grazing and proper stocking rates are good management practices.

The potential productivity for growing sugar maple is moderate on areas of Skerry soils. The potential productivity for growing balsam fir is high on areas of Adirondack soils. The seasonal high water table may cause soft ground conditions for heavy

equipment use, resulting in deep ruts and soil erosion. Logging during dry periods or during frozen ground conditions will alleviate these problems. Root growth is moderately restricted by seasonal wetness and also by the dense substratum. Restricted rooting depth increases windthrow potential. Minimal thinning and promoting water tolerant species will help overcome this limitation.

The main limitation if this unit is used as a site for dwellings is the seasonal high water table. A better drained inclusion or nearby soil should be considered for this use. Protective coatings on basement walls, installing foundation drains, and diverting surface water away from dwellings are ways to help overcome this limitation.

The main limitation if this unit is used as a site for local roads and streets is frost action. Providing coarse grained subgrade material to frost depth as well as adequate drainage in critical areas are ways to reduce potential pavement damage due to frost action.

The main limitations if this unit is used as a site for septic tank absorption fields are the slow percolation rate and the seasonal high water table. Better suited sites such as Monadnock soils should be considered to reduce costs and increase system performance. Conventional septic system designs may perform poorly on areas of this unit. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitations if this unit is used as a site for shallow excavations are the seasonal wetness and the tendency for cutbanks to cave. Limiting excavations to drier periods will help overcome the wetness limitation. Trench walls should be adequately supported to prevent cutbanks from caving in workers or other possible victims.

The capability subclass is 6s.

831C—Tunbridge-Lyman complex, 3 to 15 percent slopes, very rocky

This map unit consists of gently sloping to strongly sloping soils formed in loamy glacial till on the tops and sides of ridges. Moderately deep, well drained Tunbridge soils are on side slopes and between bedrock ridges. The shallow, somewhat excessively drained Lyman soils are on ridge tops and near bedrock outcrops. Rock outcrops occupy from 2 to 10 percent of the surface of this unit. Boulders cover up to 3 percent of the ground surface. Typically, this map unit consists of about 45 percent Tunbridge soils, 30 percent Lyman soils, and 25 percent other soils including rock outcrop. Tunbridge and Lyman soils are so intermingled that it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Tunbridge soils are as follows—

Surface layer:
0 to 1 inch, very dark brown fine sandy loam

Subsurface layer:
1 to 4 inches, reddish brown fine sandy loam

Subsoil:
4 to 9 inches, reddish brown gravelly loam
9 to 16 inches, yellowish red loam
16 to 26 inches, brown gravelly fine sandy loam
26 inches, crystalline bedrock

The typical sequence, depth, and composition of the layers of the Lyman soils are as follows—

Surface layer: 0 to 3 inches, black decomposed leaves and twigs

Subsurface layer:
3 to 6 inches, reddish gray fine sandy loam

Subsoil:
6 to 13 inches, dark reddish brown fine sandy loam
13 to 17 inches, reddish brown gravelly fine sandy loam
17 inches, crystalline bedrock

Included with this unit in mapping are about 10 percent very deep, well drained Becket soils and moderately well drained Skerry soils on footslopes and between ridges. Also included are about 5 percent Ricker soils formed in very shallow to moderately deep organic deposits on ridgetops and narrow benches. Small areas of somewhat poorly drained Adirondack soils and very poorly drained Sabattis and Tughill soils are in seepage areas at the base of bedrock exposures and along drainageways. Also, this unit includes small areas on moderately steep slopes. Included areas make up about 20 percent of this unit and range up to 40 acres each.

Soil Properties of the Tunbridge soils—

Permeability: moderate or moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally to 24 inches deep or more
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Soil Properties of the Lyman soils—

Permeability: moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 10 to 20 inches

Most areas of this unit are in woodland or brush.

This unit is poorly suited to growing cultivated crops and hay because of shallow soil and exposed bedrock including many surface boulders and stones. These surface features obstruct cultivation and cause severe wear on tillage and harvest equipment. Erosion may also be a significant problem in this area. Removing boulders and stones, applying a conservation tillage system, and growing cover crops are good management practices.

This unit is poorly suited to pasture. Bedrock exposures and surface boulders make the proper management of forage difficult. Forage density is also adversely affected. Erosion is also a management concern on the heavily traveled strongly sloping areas. Overgrazing may lead to significant sheet erosion. Key pasture species may also do poorly because of weed competition if grazing is left unchecked. Rotational grazing, proper stocking rates and yearly mowing are good management practices.

The potential productivity for growing sugar maple on areas of Tunbridge soils is moderate. The potential productivity for red spruce on areas of Lyman soils is high. Thin soil restricts root growth and results in a potentially severe windthrow hazard on areas of Lyman soil. The low available water capacity in Lyman soils also contributes to moderate seedling mortality. Planting drought tolerant species during moist soil conditions will provide better survival rates to seedlings.

The main limitation if this map unit is used as a site for dwellings is the depth to bedrock. A better suited site should be considered on deeper areas nearby. Dwellings with basements can be built above the bedrock and landscaped with additional fill.

The main limitation if this unit is used as a site for local roads and streets is the depth to bedrock. Planning road locations and grades to avoid significant bedrock exposures will minimize this limitation. Blasting of rock will probably be necessary to allow for proper road grading.

The main limitation if this unit is used as a site for septic tank absorption fields is depth to bedrock. A better suited site should be considered for this use such as areas of Monadnock soils. Conventional septic system designs will perform poorly on areas of this map unit. Alternative systems that augment the filtering capacity of this system should be considered.

The main limitation if this unit is used as a site for shallow excavations is the depth to bedrock. Digging will be difficult because of hard bedrock necessitating blasting in most areas. Excavations should be routed through deeper nearby soils where possible.

The capability subclass is 6s.

831D—Tunbridge-Lyman complex, 15 to 35 percent slopes, very rocky

This map unit consists of moderately steep and steep soils formed in loamy glacial till on the tops and sides of hills and ridges. Moderately deep, well drained Tunbridge soils are on side slopes between bedrock edges. The shallow, somewhat excessively drained Lyman soils are on ridge tops and near bedrock outcrops. Rock outcrops cover from 2 to 10 percent of the surface of this unit. Boulders cover up to 3 percent of the ground surface. Typically, this map unit consists of about 45 percent Tunbridge soils, 30 percent Lyman soils, and 25 percent other soils including rock outcrop. Tunbridge and Lyman soils are so intermingled that it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Tunbridge soils are as follows—

Surface layer:
0 to 1 inch, very dark brown fine sandy loam

Subsurface layer:
1 to 4 inches, reddish brown fine sandy loam

Subsoil:
4 to 9 inches, reddish brown gravelly loam
9 to 16 inches, yellowish red loam
16 to 26 inches, brown gravelly fine sandy loam
26 inches, crystalline bedrock

The typical sequence, depth, and composition of the layers of the Lyman soils are as follows—

Surface layer:
0 to 3 inches, black decomposed leaves and twigs

Subsurface layer:
3 to 6 inches, reddish gray fine sandy loam

Subsoil:
6 to 13 inches, dark reddish brown fine sandy loam
13 to 17 inches, reddish brown gravelly fine sandy loam
17 inches, crystalline bedrock

Included with this unit in mapping are about 10 percent very deep Becket and Skerry soils on footslopes and between ridges. Also included are about 5 percent

Ricker soils formed in very shallow to moderately deep organic deposits on ridgetops and narrow benches. About 5 percent of this unit includes areas on strongly sloping and very steep slopes. Small areas of somewhat poorly drained Adirondack soils and very poorly drained Sabattis or Tughill soils are in seepage areas at the base of bedrock exposures and along drainageways. Included areas make up about 25 percent of this unit and range up to 40 acres each.

Soil Properties of the Tunbridge soils—

Permeability: moderate or moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally to 24 inches deep or more
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Soil Properties of the Lyman soils—

Permeability: moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 10 to 20 inches

Most areas of this unit are used as woodland or brush.

This unit is poorly suited to growing cultivated crops and hay because of moderately steep slopes, a thin soil layer in areas of Lyman soils, and exposed bedrock including many surface boulders and stones. There is a severe hazard of excessive soil erosion if this unit is cultivated. Bedrock exposures and stones obstruct cultivation and cause severe wear on tillage and harvesting equipment.

This unit is poorly suited to pasture. Bedrock exposures and large surface stones make proper management of forage difficult. Forage density is also adversely affected. Erosion is a serious management concern on the heavily traveled areas of this unit. Overgrazing may lead to significant sheet erosion. Key pasture species will also suffer from weed competition if grazing is left unchecked. Rotational grazing and proper stocking rates are good management practices.

The potential productivity for growing sugar maple on areas of Tunbridge soils is moderate. The potential productivity for growing red spruce on areas of Lyman soils is high. Steep slopes make mechanized operations difficult and hazardous in places. Soil erosion is a moderate management problem on these moderately steep and steep areas. Building logging roads on the contour and installing water bars will help control erosion. Seedling mortality can be excessive from droughtiness because of low available water capacity. Planting drought tolerant species during moist soil conditions can minimize loss of seedlings. There is potentially a severe windthrow hazard in areas of Lyman soils because of restricted root growth. Keeping tree thinning to a minimum will reduce the chance of windthrow.

The main limitations of this unit for dwellings are slope and depth to bedrock. These moderately steep and steep slopes will require extensive grading and landscaping on most areas. Designing structures to conform to the natural slope will save on cost of construction and maintenance. Additional fill material may be needed to properly landscape around dwellings.

The main limitations of this unit for local roads and streets are depth to bedrock and slope. Blasting of rock may be necessary for many sections of roads. Constructing roads along the contour will help minimize the slope limitation.

The main limitations if this unit is used as a site for septic tank absorption fields are slope and depth to bedrock. A better suited site should be considered for this use. Conventional septic system designs will perform poorly on this unit. Alternative systems that augment the filtering capacity of this system should be considered.

The main limitations if this unit is used as a site for shallow excavations are slope and depth to bedrock. Maneuvering equipment on this moderately steep and steep area can be difficult and hazardous. Blasting may be necessary for many areas of this unit. Shallow excavations should be routed through deeper, less sloping areas where possible.

The capability subclass is 7s.

831F—Tunbridge-Lyman complex, 35 to 60 percent slopes, very rocky

This map unit consists of very steep soils formed in loamy glacial till on the sides of hills, mountains, and ridges. Moderately deep, well drained Tunbridge soils are on side slopes and on benches. The shallow, somewhat excessively drained Lyman soils are near ridges and bedrock exposures. Rock outcrops generally cover 2 to 10 percent of the surface of this mapping unit. Boulders cover up to 3 percent of the ground surface. Typically, this unit consists of about 45 percent Tunbridge soils, 30 percent Lyman soils, and 25 percent other soils including rock outcrop. Tunbridge and Lyman soils are so intermingled that it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Tunbridge soils are as follows—

Surface layer:
0 to 1 inch, very dark brown fine sandy loam

Subsurface layer:
1 to 4 inches, reddish brown fine sandy loam

Subsoil:
4 to 9 inches, reddish brown gravelly loam
9 to 16 inches, yellowish red loam
16 to 26 inches, brown gravelly fine sandy loam
26 inches, crystalline bedrock

The typical sequence, depth, and composition of the layers of the Lyman soils are as follows—

Surface layer:
0 to 3 inches, black decomposed leaves and twigs

Subsurface layer:
3 to 6 inches, reddish gray fine sandy loam

Subsoil:
6 to 13 inches, dark reddish brown fine sandy loam
13 to 17 inches, reddish brown gravelly fine sandy loam
17 inches, crystalline bedrock

Included in this map unit are about 10 percent Ricker soils formed in very shallow to moderately deep organic deposits on ridgetops and narrow benches. Also included are about 5 percent very deep Becket and Monadnock soils on lower side slopes. About 5 percent of this unit includes strongly sloping to steep, narrow benches. Some small areas have bedrock exposures covering more than 10 percent of the ground surface. Included areas make up about 25 percent of this unit and range up to 40 acres each.

Soil Properties of the Tunbridge soils—

Permeability: moderate or moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally to 24 inches deep or more
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Soil Properties of the Lyman soils—

Permeability: moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock contact
Shrink-swell potential: low to moderate
Depth to bedrock: 10 to 20 inches

Most areas of this unit are in woodland.

This unit is not suited to growing cultivated crops and hay because of very steep slopes and bedrock ledges.

This unit is generally not suited to pasture. Erosion is a serious management concern on pastured areas of this unit. During most of the grazing season, forage production is limited by the low available water holding capacity in areas of Lyman soils.

The potential productivity for growing sugar maple on areas of Tunbridge soil is moderate. The potential productivity for growing red spruce on areas of Lyman soils is high. Soil erosion is a severe hazard on this very steep map unit. Building roads and skid trails on the contour and water barring them will help alleviate erosion. Excessive slope makes mechanized operations impractical and hazardous in most places. Severe windthrow can occur because of shallow root growth in areas of Lyman soils. Thinning operations should be kept to a minimum to lower windthrow potential.

The main limitations if this unit is used as a site for dwellings are slope and depth to bedrock. A better suited site should be considered. These very steep slopes will require extensive grading and landscaping on most areas of this map unit.

The main limitations if this unit is used as a site for local roads and streets are depth to bedrock and very steep slopes. Constructing roads along the contour will reduce the slope limitation. Blasting of rock will be necessary in many areas of this unit.

The main limitations if this unit is used as a site for septic tank absorption fields are very steep slopes and depth to bedrock. A better suited site should be considered for this use. Because of slope and thin soil, there is a severe risk of effluent seepage to the surface if a conventional septic field is placed on this unit.

The main limitations if this unit is used as a site for shallow excavations are very steep slopes and depth to bedrock. Routing excavations around this unit should be considered. Maneuvering equipment on most areas will be hazardous. Blasting may be necessary in many areas.

The capability subclass is 7s.

861F—Lyman-Ricker complex, 35 to 60 percent slopes, very rocky

This map unit consists of very steep soils on the sides of mountains and ridges. Shallow, somewhat excessively drained Lyman soils formed in loamy glacial till. Very

shallow to moderately deep, well drained Ricker soils formed in mostly organic deposits. Rock outcrops occupy up to 10 percent of the surface of this mapping unit. Boulders cover up to 3 percent of the ground surface. Typically, this unit consists of about 45 percent Lyman soils, 30 percent Ricker soils, and 25 percent other soils including rock outcrop. Lyman and Ricker soils are so intermingled that it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Lyman soils are as follows—

Surface layer:
0 to 3 inches, black decomposed leaves and twigs

Subsurface layer:
3 to 6 inches, reddish gray fine sandy loam

Subsoil:
6 to 13 inches, dark reddish brown fine sandy loam
13 to 17 inches, reddish brown gravelly fine sandy loam
17 inches, crystalline bedrock

The typical sequence, depth, and composition of the layers of the Ricker soils are as follows—

Surface layer:
0 to 3 inches, black slightly decomposed moss, twigs, and needles

Subsurface layer:
3 to 5 inches, black mucky peat
5 to 6 inches, black muck
6 to 7 inches, dark grayish brown loam
7 inches, crystalline bedrock

Included in this map unit are about 5 percent Tunbridge soils in areas that are moderately deep to bedrock. About 5 percent of this unit is very deep Becket soils near footslopes. About 10 percent of this unit includes moderately steep and steep areas. Some areas of this unit have more than 10 percent bedrock outcrops on the ground surface. Also, there are small areas of rock debris or talus. Included areas make up about 25 percent of this unit and range up to 40 acres each.

Soil Properties of the Lyman soils—

Permeability: moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches
Root zone: to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 10 to 20 inches

Soil Properties of the Ricker soils—

Permeability: moderately slow to moderately rapid in the surface organic layer, moderately rapid in the underlying organic layers, and moderate or moderately rapid in the mineral subsurface layer
Available water capacity (average for a 40-inch profile): low or moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 2 to 26 inches

Most areas of this unit are in woodland.

This unit is not suited to growing cultivated crops and hay because of very steep slopes and bedrock ledges.

This unit is not suited to pasture. Soil erosion is a serious management concern on pastured areas of this unit. Droughty soil conditions limit forage production during most of the grazing season.

The potential productivity for growing red spruce on areas of Lyman soils is high. The potential productivity for growing red spruce on areas of Ricker soils is moderate. Erosion is a severe hazard on this very steep map unit. Building roads and skid trails on the contour and installing water bars will help alleviate erosion. Excessive slope makes mechanized operations impractical and hazardous in most places. Severe windthrow can occur because of shallow root growth in areas of Lyman soils. Thinning operations should be kept to a minimum to lower windthrow potential.

The main limitations if this unit is used as a site for dwellings are slope and depth to rock. Dwellings without basements are also limited by the low soil strength of the organic Ricker soils. A better suited site should be considered. These very steep slopes will require extensive grading and landscaping on most areas of this map unit.

The main limitations if this unit is used as a site for local roads and streets are depth to bedrock and very steep slopes. Constructing roads along the contour will reduce the slope limitation. Blasting of rock will be necessary in many areas of this unit.

The main limitations if this unit is used as a site for septic tank absorption fields are very steep slopes and depth to bedrock. A better suited site should be considered for this use. Because of slope and thin soil, there is a severe risk of effluent seepage to the surface if a conventional septic field is placed on this unit.

The main limitations if this unit is used as a site for shallow excavations are very steep slopes, depth to bedrock, and the high organic matter content in areas of Ricker soils. Routing excavations around this unit should be considered. Maneuvering equipment on most areas will be hazardous. Blasting may be necessary in many areas.

The capability subclass is 7s.

931C—Mundalite-Rawsonville-Worden complex, 3 to 15 percent slopes, very bouldery

This map unit consists of gently sloping and strongly sloping soils on the tops and sides of bedrock controlled ridges in glaciated uplands. Very deep, well drained Mundalite soils are generally on side slope positions. The moderately deep, well drained Rawsonville soils are generally on higher positions and near bedrock outcrops. Very deep, somewhat poorly drained Worden soils are generally on footslopes and low positions between ridges. Boulders cover up to 3 percent of the ground surface. This map unit consists of about 40 percent Mundalite soils, 25 percent Rawsonville soils, 20 percent Worden soils, and 15 percent other soils. Mundalite, Rawsonville, and Worden soils are so intermingled that it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Mundalite soil are as follows—

Surface layer:
1 inch thick layer of leaves and twigs
0 to 1 inch, black highly decomposed leaves

Subsurface layer:
1 to 3 inches, reddish gray fine sandy loam

Subsoil:
3 to 14 inches, dark reddish brown fine sandy loam
14 to 27 inches, dark reddish brown, cobbly fine sandy loam

Substratum:
27 to 37 inches, dark yellowish brown, very cobbly fine sandy loam
37 to 72 inches, dark yellowish brown, very cobbly loamy sand with few mottles

The typical sequence, depth, and composition of the layers of the Rawsonville soil are as follows—
Surface layer:
0 to 1 inch black highly decomposed leaves
1 to 3 inches, black loam

Subsurface layer:
3 to 4 inches, reddish gray fine sandy loam

Subsoil:
4 to 10 inches, dark reddish brown loam
10 to 20 inches, reddish brown fine sandy loam
20 to 22 inches, brown fine sandy loam
22 to 26 inches, dark yellowish brown fine sandy loam with few mottles
26 inches, crystalline bedrock

The typical sequence, depth, and composition of the layers of Worden soil is as follows—
Surface layer:
1 inch thick layer of undecomposed leaves and roots
0 to 1 inch, black fine sandy loam

Subsurface layer:
1 to 4 inches, brown fine sandy loam

Subsoil:
4 to 8 inches, dark brown fine sandy loam
8 to 21 inches, brown fine sandy loam with many mottles

Substratum:
21 to 31 inches, dark yellowish brown cobbly fine sandy loam
31 to 72 inches, brown cobbly fine sandy loam with common mottles

Included with this unit in mapping are about 5 percent shallow Hogback soils on ridge crests and areas adjacent to bedrock outcrops. About 5 percent of this unit consists of soils similar to Monadnock soils in areas lacking a dense substratum. Small areas of well drained soil having bedrock 40 to 60 inches deep are included. Also included are small areas of moderately steep slopes and small areas of poorly drained soils along drainageways and seeps near the base of slopes. Included areas make up about 15 percent of this unit and range up to 40 acres each.

Soil Properties of the Mundalite soils—

Permeability: moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for a 40-inch profile): high
Depth to seasonal high water table: perched 30 to 42 inches deep at some time during March and April
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Rawsonville soils—

Permeability: moderate or moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): moderate to high

Depth to seasonal high water table: greater than 72 inches deep
Root zone: mainly to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Soil Properties of the Worden soils—

Permeability: moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for a 40-inch profile): moderate to high
Depth to seasonal high water table: perched 12 to 18 inches deep at some time from September through May
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in woodland or brush.

This unit is poorly suited to cultivated crops and hay. Surface boulders and stones obstruct cultivation and other equipment use. Soil erosion and subsequent loss of soil productivity can occur where vegetation is removed or disturbed. Slopes on this unit are commonly in a complex pattern which limits application of some conservation practices. On areas of Worden soils, the seasonal high water table may delay farming operations due wet soil conditions. Boulder and stone removal, conservation tillage systems, and the use of cover crops are good management practices.

This unit is poorly suited to pasture. Surface boulders and stones limit pasture management practices such as yearly mowing. Soil erosion and compaction are management concerns on heavily traveled areas of this unit especially during wet periods. Overgrazing should be avoided. Key pasture species may also diminish because of weed competition if grazing is left unchecked. Boulder and stone clearing, rotational grazing, and proper stocking rates are good management practices.

The potential productivity for growing sugar maple is moderate on areas of Mundalite and Rawsonville soils. The potential productivity for growing red maple is moderate on areas of Worden soils. Soil erosion can be a moderate management concern where logging occurs on strongly sloping areas of this unit. Routing roads and skid trails along the contour and installing waterbars will help prevent excessive soil erosion. These soils tend to be slick, especially when wet, which can limit equipment use. Restricting timber operations to drier periods will help reduce the risk of damaging equipment and topsoil. Because root growth is restricted by the moderate depth to bedrock in areas of Rawsonville soils, and the seasonal high water table in areas of Worden soils, there is some risk of windthrow on this unit. Thinning operations should be minimal to reduce windthrow potential.

The main limitations if this unit is used as a site for dwellings are the moderate depth to bedrock in areas of Rawsonville soils and the seasonal wetness in areas of Mundalite and Worden soils. Building sites will require some grading and landscaping expenses. However, shaping of the land may be restricted in bedrock-controlled areas. Designing structures to conform to the natural terrain will help compensate for the slope limitation and depth to rock. Protective coatings on basement walls and foundation drains can help alleviate seasonal wetness.

The main limitations if this unit is used as a site for local roads and streets are frost action, and areas of moderately deep to bedrock Rawsonville soils. Providing coarse grained subgrade material to frost depth is a way to reduce potential pavement damage due to frost action.

The main limitations if this unit is used as a site for septic tank absorption fields are the seasonal high water table, moderately slow permeability in areas of Mundalite and Worden soils, and the moderate depth to bedrock in areas of Rawsonville soils. A better suited inclusion or nearby units such as Monadnock soils, should be

considered for this use. Conventional septic system designs may perform poorly on this unit. Alternative systems that augment the filtering capacity of this system should be considered.

The main limitations if this unit is used as a site for shallow excavations are seasonal wetness in areas of Mundalite and Worden soils, the depth to bedrock in areas of Rawsonville soils, and the tendency for cutbanks to cave in. Limiting work to drier periods will help overcome the seasonal wetness limitation. Digging in areas of Rawsonville soils may require blasting. Trench walls should be adequately supported to prevent cutbanks from caving in on workers or other possible victims.

The capability subclass is 6s

931D—Mundalite-Rawsonville complex, 15 to 35 percent slopes, very bouldery

This map unit consists of moderately steep and steep soils on the sides of hills and ridges in glaciated uplands. Very deep, well drained Mundalite soils are generally on side slopes and footslopes. The moderately deep, well drained Rawsonville soils are generally on upper slopes and near bedrock outcrops. Boulders cover up to 3 percent of the ground surface. This map unit consists of about 50 percent Mundalite soils, 30 percent Rawsonville soils, and 20 percent other soils. Mundalite and Rawsonville soils are so intermingled that it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Mundalite soil are as follows—

Surface layer:
1 inch thick layer of leaves and twigs
0 to 1 inch, black highly decomposed leaves

Subsurface layer:
1 to 3 inches, reddish gray fine sandy loam

Subsoil:
3 to 14 inches, dark reddish brown fine sandy loam
14 to 27 inches, dark reddish brown, cobbly fine sandy loam

Substratum:
27 to 37 inches, dark yellowish brown, very cobbly fine sandy loam
37 to 72 inches, dark yellowish brown, very cobbly loamy sand with few mottles

The typical sequence, depth, and composition of the layers of the Rawsonville soil are as follows—

Surface layer:
0 to 1 inch, black highly decomposed leaves
1 to 3 inches, black loam

Subsurface layer:
3 to 4 inches, reddish gray fine sandy loam

Subsoil:
4 to 10 inches, dark reddish brown loam
10 to 20 inches, reddish brown fine sandy loam
20 to 22 inches, brown fine sandy loam
22 to 26 inches, dark yellowish brown fine sandy loam with few mottles
26 inches, crystalline bedrock

Included with this unit in mapping are about 5 percent somewhat poorly drained Worden soils on footslopes and along drainageways. Shallow Hogback soils are on ridge crests and adjacent to bedrock outcrops and make up about 5 percent of the

unit. About 5 percent of this unit consists of well drained soils similar to Monadnock soils in areas lacking a dense substratum. Also included in this unit are small areas of well drained soil having bedrock 40 to 60 inches deep and small areas of strongly sloping or very steep slopes. Included areas make up about 20 percent of this unit and range up to 40 acres each.

Soil Properties of the Mundalite soils—

Permeability: moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for a 40-inch profile): high
Depth to seasonal high water table: perched 30 to 42 inches deep at some time during March and April
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Rawsonville soils—

permeability: moderate or moderately rapid throughout the mineral soil.
Available water capacity (average for a 40-inch profile): moderate to high
Depth to seasonal high water table: greater than 72 inches deep
Root zone: mainly to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Most areas of this soil are in woodland.

This unit is poorly suited to cultivated crops and hay. The moderately steep slopes and surface boulders restrict cultivation and other equipment use. Soil erosion and subsequent loss of soil productivity is a serious hazard where vegetation is removed or disturbed.

This unit is poorly suited to pasture. Steep slopes and surface boulders limit pasture management practices such as yearly mowing. Soil erosion can be a serious concern on heavily traveled areas of this unit. Overgrazing should be avoided. Key pasture species will diminish because of weed competition if grazing is left unchecked. Rotational grazing and proper stocking rates are good management practices.

The potential productivity for growing sugar maple is moderate on the Mundalite soils. The potential productivity for growing sugar maple on Rawsonville soils is moderate. Soil erosion can be a severe management problem on these moderately steep and steep slopes. Routing roads and skid trails along the contour and installing waterbars may help prevent excessive soil erosion. Safe equipment use is also moderately limited on steep slopes. Because root growth is restricted by the moderate depth to bedrock in areas of Rawsonville soils, and the seasonal high water table in areas of Worden soils, there is some risk of windthrow on this unit. Thinning operations should be minimized to reduce the potential of windthrow.

The main limitations if this unit is used as a site for dwellings are slope, seasonal wetness in areas of Mundalite soils, and the moderate depth to bedrock in areas of Rawsonville soils. A better suited site should be considered for this use. Building sites will require significant grading and landscaping in many areas of this unit compared to less sloping areas. Also, landscaping around dwellings may be limited by thin soil areas. Designing structures to conform to the natural slopes and areas of thin soil can alleviate these limitations. Protective coatings on basement walls and foundation drains can alleviate seasonal seepage problems.

The main limitations if this unit is used as a site for local roads and streets are the moderately steep and steep slopes. Costs of grading and landscaping on areas of

this soil will be high in comparison to less sloping inclusions or nearby soils. Constructing roads along the contour will reduce the slope limitation.

The main limitations if this unit is used as a site for septic tank absorption fields are the slope, the seasonal wetness and moderately slow permeability in areas of Mundalite soils, and the moderate depth to bedrock in areas of Rawsonville soils. A better suited site should be considered for this use such as Monadnock soils on nearby areas. Conventional septic system designs may perform poorly on this unit. Alternative systems that augment the filtering capacity of this system should be considered.

The main limitations if this unit is used as a site for shallow excavations are the slope, the possibility of cutbanks caving in, the seasonal wetness in areas of Mundalite soils, and the depth to bedrock in areas of Rawsonville soils. Digging equipment may be unsafe to operate in most areas having moderately steep and steep slopes. Limiting work to drier periods will alleviate wetness in trenches. Excavations in areas of Rawsonville soils may require blasting. Mechanical shoring of trench walls will help protect workers if the soil caves in. Excavations should be routed around this unit where possible.

The capability subclass is 7s

933C—Mundalite-Worden complex, 3 to 15 percent slopes, very bouldery

This map unit consists of very deep, gently sloping and strongly sloping soils on glaciated uplands. Well drained Mundalite soils are generally on side slope and convex slope positions. Very deep, somewhat poorly drained Worden soils are generally on footslopes and other slightly concave positions. Boulders cover up to 3 percent of the ground surface. This map unit consists of about 50 percent Mundalite soils, 30 percent Worden soils, and 20 percent other soils. Mundalite and Worden soils are so intermingled that it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Mundalite soil are as follows—

Surface layer:
1 inch thick layer of leaves and twigs
0 to 1 inch, black decomposed leaves

Subsurface layer:
1 to 3 inches, reddish gray fine sandy loam

Subsoil:
3 to 14 inches, dark reddish brown fine sandy loam
14 to 27 inches, dark reddish brown, cobbly fine sandy loam

Substratum:
27 to 37 inches, dark yellowish brown, very cobbly fine sandy loam
37 to 72 inches, dark yellowish brown, very cobbly loamy sand with few mottles

The typical sequence, depth, and composition of the layers of Worden soil are as follows—

Surface layer:
1 inch thick layer of undecomposed leaves and roots
0 to 1 inch, black fine sandy loam

Subsurface layer:
1 to 4 inches, brown fine sandy loam

Subsoil:
4 to 8 inches, dark brown fine sandy loam

8 to 21 inches, brown fine sandy loam with many mottles

Substratum:
21 to 31 inches, dark yellowish brown cobbly fine sandy loam
31 to 72 inches, brown cobbly fine sandy loam with common mottles

Included with this unit in mapping are about 5 percent moderately deep Rawsonville soils and shallow Hogback soils on ridge crests near bedrock outcrops. About 10 percent of this unit consists of well drained soils similar to Monadnock soils in areas lacking a dense substratum. Small areas of very poorly drained Sabattis soils are along drainageways and seeps. Also included are small areas of moderately steep slopes. Included areas make up about 20 percent of this unit and range up to 40 acres each.

Soil Properties of the Mundalite soils—

Permeability: moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for a 40-inch profile): high
Depth to seasonal high water table: perched 30 to 42 inches deep at some time during March and April
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Worden soils—

Permeability: moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for a 40-inch profile): moderate to high
Depth to seasonal high water table: perched 12 to 18 inches deep at some time from September through May
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in woodland or brush.

This unit is poorly suited to cultivated crops and hay. Surface boulders and stones obstruct cultivation and other equipment use. Soil erosion and subsequent loss of soil productivity can occur where vegetation is removed or disturbed. On areas of Worden soils, the seasonal high water table may delay farming operations due to wet soil conditions. Boulder and stone removal, conservation tillage systems, maintenance of drainageways, and the use of cover crops are good management practices.

This unit is poorly suited to pasture. Surface boulders and stones limit pasture management practices such as yearly mowing. Soil erosion and compaction are management concerns on heavily traveled areas of this unit especially during wet periods. Overgrazing should be avoided. Key pasture species may also diminish because of weed competition if grazing is left unchecked. Boulder and stone clearing, rotational grazing, and proper stocking rates are good management practices.

The potential productivity for growing sugar maple is moderate on areas of Mundalite soils. The potential productivity for growing red maple on areas of Worden soils is moderate. Soil erosion can be a moderate management concern where logging occurs on strongly sloping areas of this unit. Routing roads and skid trails along the contour and installing waterbars will help prevent excessive soil erosion. These soils tend to be slick, especially when wet, which can limit equipment use. Restricting timber operations to drier periods will help reduce the risk of damaging equipment and topsoil. Because root growth is restricted by the dense substratum and seasonal high water table in areas of Worden soils, there is moderate risk of

windthrow on this unit. Thinning operations should be minimal to reduce windthrow potential.

The main limitation if this unit is used as a site for dwellings is the seasonal high water table, especially in areas of Worden soils. Protective coatings on basement walls, foundation drains and diverting surface water away from buildings can alleviate seasonal wetness.

The main limitation if this unit is used as a site for local roads and streets is frost action. Providing coarse grained subgrade material to frost depth and installing adequate drainage in critical areas are ways to reduce potential pavement damage due to frost action.

The main limitations if this unit is used as a site for septic tank absorption fields are the seasonal high water table and the moderately slow or slow permeability. A better suited site should be considered for this use such as areas of Monadnock soils. Conventional septic system designs will perform poorly on most areas of this unit. Alternative systems that augment the filtering capacity of this system should be considered.

The main limitations if this unit is used as a site for shallow excavations are the seasonal high water table and the tendency for cutbanks to cave in. Limiting work to dry periods will help overcome the wetness limitation. Trench walls should be adequately supported to prevent cutbanks from caving in on workers or other possible victims.

The capability subclass is 6s.

941C—Rawsonville - Hogback complex, 3 to 15 percent slopes, very rocky

This map unit consists of well drained, gently sloping to strongly sloping soils formed in loamy glacial till. It occurs on the tops and sides of high elevation mountains. Moderately deep Rawsonville soils are mainly on side slopes and between bedrock ridges. Shallow Hogback soils are mainly on ridge tops and near bedrock exposures. Rock outcrops make up 2 to 10 percent of the surface of this unit. Boulders cover up to 3 percent of the ground surface. Typically, this map unit consists of about 45 percent Rawsonville soils, 30 percent Hogback soils, and 25 percent other soils including rock outcrop. Rawsonville and Hogback soils are so intermingled that it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Rawsonville soil are as follows—

Surface layer:
0 to 1 inch, black highly decomposed leaves
1 to 3 inches, black loam

Subsurface layer:
3 to 4 inches, reddish gray fine sandy loam

Subsoil:
4 to 10 inches, dark reddish brown loam
10 to 20 inches, reddish brown fine sandy loam
20 to 22 inches, brown fine sandy loam
22 to 26 inches, dark yellowish brown fine sandy loam with few mottles
26 inches, crystalline bedrock

The typical sequence, depth, and composition of the layers of the Hogback soil are as follows—

Surface layer:
1 inch thick layer of undecomposed needles, leaves and twigs

0 to 1 inch, black fine sandy loam

Subsurface layer:
1 to 6 inches, reddish gray loamy fine sand

Subsoil:
6 to 11 inches, black fine sandy loam
11 to 14 inches, dark reddish brown gravelly fine sandy loam
14 inches, crystalline bedrock

Included with this unit in mapping are about 10 percent very deep Mundalite soils on side slopes and between ridges. About 5 percent well drained Ricker soils formed in very shallow to moderately deep organic deposits on ridgetops and narrow benches. About 3 percent of the unit includes soils on moderately steep slopes. Also, small areas of somewhat poorly drained Worden soils or similar very poorly drained soils in seep areas at the base of bedrock exposures and along drainageways. Included areas make up about 25 percent of this unit and range up to 40 acres each.

Soil Properties of the Rawsonville soils—

Permeability: moderate or moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): moderate to high
Depth to seasonal high water table: greater than 72 inches deep
Root zone: mainly to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Soil Properties of the Hogback soils—

Permeability: moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 10 to 20 inches

Most areas of this unit are in woodland or brush.

This unit is poorly suited to growing cultivated crops and hay. Shallow soil areas, bedrock outcrops, and surface boulders and stones obstruct cultivation and cause severe wear on tillage equipment. Soil erosion can also be a significant problem in areas where vegetation has been disturbed. The growing season will be relatively short in areas of this map unit. Boulder and stone removal, conservation tillage systems, and the use of cover crops are good management practices to consider.

This unit is poorly suited to pasture. Bedrock exposures and surface boulders and stones make the proper management such as yearly mowing difficult. Forage density is also adversely affected by these surface features. Erosion is a serious management concern on heavily traveled areas of this unit. Overgrazing may lead to significant sheet erosion and key pasture species will experience weed competition. Boulder and stone removal, rotational grazing, proper stocking rates and yearly mowing are good management practices.

The potential productivity for growing sugar maple on Rawsonville soils is moderate. The potential productivity for growing red spruce on Hogback soils is high. Soil erosion is a moderate hazard on strongly sloping areas of this unit. Building logging roads and skid trails on the contour and minimal tree thinning will reduce potential erosion. These soils tend to be slick when moist creating a hazard when operating heavy equipment on this unit. Root growth is limited by bedrock depth in areas of Hogback soils resulting in potentially severe windthrow.

The main limitation if this map unit is used as a site for dwellings is the depth to bedrock. A better suited site should be considered on deeper soils. With additional fill, dwellings with basements can be built above bedrock and landscaped to the natural slope conditions.

The main limitations if this unit is used as a site for local roads and streets are frost action and the depth to bedrock. Using coarse grained subgrade material will help reduce pavement damage due to frost heaving. Planning road locations and grades so that significant bedrock exposures are avoided will help minimize the depth to bedrock limitation. Blasting of rock will probably be necessary to allow for proper road grade.

The main limitation if this unit is used as a site for septic tank absorption fields is depth to bedrock. A better suited site should be considered for this use such as lower elevation, deeper Monadnock soils. Conventional septic system designs will perform poorly on this unit. Alternative systems that augment the filtering capacity of this system should be considered.

The main limitation if this unit is used as a site for shallow excavations is the depth to bedrock. Digging will be difficult because of hard bedrock conditions requiring blasting in most areas. Excavations should be routed around this unit where possible.

The capability subclass is 6s.

941D—Rawsonville-Hogback complex, 15 to 35 percent slopes, very rocky

This map unit consists of well drained, moderately steep and steep soils formed in loamy glacial till. It occurs on the tops and sides of high elevation mountains. Moderately deep Rawsonville soils are mainly on side slopes. The shallow Hogback soils are mainly on ridge tops and adjacent to bedrock exposures. Rock outcrops make up 2 to 10 percent of the surface of this unit. Boulders cover up to 3 percent of the ground surface. Typically, this map unit consists of about 45 percent Rawsonville soils, 30 percent Hogback soils, and 25 percent other soils including rock outcrop. Rawsonville and Hogback soils are so intermingled that it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Rawsonville soil are as follows—

Surface layer:
0 to 1 inch, black highly decomposed leaves
1 to 3 inches, black loam

Subsurface layer:
3 to 4 inches, reddish gray fine sandy loam

Subsoil:
4 to 10 inches, dark reddish brown loam
10 to 20 inches, reddish brown fine sandy loam
20 to 22 inches, brown fine sandy loam
22 to 26 inches, dark yellowish brown fine sandy loam with few mottles
26 inches, crystalline bedrock

The typical sequence, depth, and composition of the layers of the Hogback soil are as follows—

Surface layer:
1 inch thick layer of undecomposed needles, leaves and twigs
0 to 1 inch, black fine sandy loam

Subsurface layer:
1 to 6 inches, reddish gray loamy fine sand

Subsoil:
6 to 11 inches, black fine sandy loam
11 to 14 inches, dark reddish brown gravelly fine sandy loam
14 inches, crystalline bedrock

Included with this unit in mapping are about 10 percent very deep Mundalite soils on side slopes and between ridges. About 5 percent well drained Ricker soils formed in very shallow to moderately deep organic deposits on ridgetops and narrow benches. Small inclusions of soils on strongly sloping and very steep slopes occur. Small areas of somewhat poorly drained Worden soils and similar very poorly drained soils in seepage areas at the base of bedrock exposures and along drainageways. Included areas make up about 25 percent of this unit and range up to 40 acres each.

Soil Properties of the Rawsonville soils—

Permeability: moderate or moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): moderate to high
Depth to seasonal high water table: greater than 72 inches deep
Root zone: mainly to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Soil Properties of the Hogback soils—

Permeability: moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 10 to 20 inches

Most areas of this unit are in woodland.

This unit is poorly suited to growing cultivated crops and hay because of steep slopes, thin soil layer, and bedrock outcrops along with many surface stones. There is a severe hazard of topsoil erosion in areas where vegetation has been disturbed. Bedrock exposures, boulders, and moderately steep or steep slopes are obstructions to farm equipment use.

This unit is poorly suited to pasture. Bedrock outcrops, surface boulders and stones and steep slopes make the proper management of pasture difficult. Forage density is also adversely affected by these surface features. Erosion is a serious management concern on heavily traveled areas of this unit. Overgrazing may lead to significant sheet and gully erosion and key pasture species will experience weed competition. Boulder and stone removal, rotational grazing, and proper stocking rates are good management practices.

The potential productivity for growing sugar maple on Rawsonville soils is moderate. The potential productivity for growing red spruce on Hogback soils is high. Soil erosion is a severe hazard on this moderately steep and steep unit. Building logging roads and skid trails on the contour, minimal tree thinning, and installing water bars will help to reduce erosion. These soils tend to be slick when moist creating unsafe conditions when operating heavy equipment. Root growth is limited by bedrock depth in Hogback soils, resulting in potentially severe windthrow.

The main limitations if this unit is used as a site for dwellings are slope and depth to bedrock. Moderately steep and steep slopes will require considerable grading and landscaping expenses on most areas of this map unit. Designing dwellings to conform to the natural slope will reduce the slope limitation.

The main limitations if this unit is used as a site for local roads and streets are depth to bedrock and slope. Blasting of rock may be necessary for roads on this unit. Constructing roads along the contour will reduce the slope limitation. The costs of grading and landscaping will likely be high for this unit in comparison to deeper, less sloping map units.

The main limitations if this unit is used as a site for septic tank absorption fields are slope and depth to bedrock. A better suited site should be considered. Conventional septic system designs will perform poorly on this unit. Alternative systems that augment the filtering capacity of this system should be considered.

The main limitations if this unit is used as a site for shallow excavations are slope and depth to bedrock. Excavations should be routed around this unit where possible. Heavy machine operation can be difficult and unsafe in most areas because of moderately steep and steep slopes. Blasting of bedrock may be necessary to excavate trenches within this unit.

The capability subclass is 7s.

941F—Rawsonville- Hogback complex, 35 to 60 percent slopes, very rocky

This map unit consists of well drained, very steep soils formed in loamy glacial till on the sides of high elevation mountains. Moderately deep Rawsonville soils are mainly on side slopes. The shallow Hogback soils are on upper slopes and near bedrock ledges. Rock outcrops make up about 2 to 10 percent of the surface of this unit. Boulders cover up to 3 percent of the ground surface. Typically, this map unit consists of about 40 percent Rawsonville soils, 35 percent Hogback soils, and 25 percent other soils including rock outcrop. Rawsonville and Hogback soils are so intermingled that it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Rawsonville soil are as follows—

Surface layer:
0 to 1 inch, black highly decomposed leaves
1 to 3 inches, black loam

Subsurface layer:
3 to 4 inches, reddish gray fine sandy loam

Subsoil:
4 to 10 inches, dark reddish brown loam
10 to 20 inches, reddish brown fine sandy loam
20 to 22 inches, brown fine sandy loam
22 to 26 inches, dark yellowish brown fine sandy loam with few mottles
26 inches, crystalline bedrock

The typical sequence, depth, and composition of the layers of the Hogback soil are as follows—

Surface layer:
1 inch thick layer of undecomposed needles, leaves and twigs
0 to 1 inch, black fine sandy loam

Subsurface layer:
1 to 6 inches, reddish gray loamy fine sand

Subsoil:
6 to 11 inches, black fine sandy loam
11 to 14 inches, dark reddish brown gravelly fine sandy loam
14 inches, crystalline bedrock

Included with this unit in mapping are about 10 percent well drained Ricker soils formed in very shallow to moderately deep organic deposits on ridges and narrow benches. Also included are about 5 percent very deep Mundalite soils on footslopes and between ridges. Small inclusions of soils with only moderately steep or steep slopes occur. Also included are small areas having more bedrock outcrops. Included areas make up about 25 percent of this unit and range up to 40 acres each.

Soil Properties of the Rawsonville soils—

Permeability: moderate or moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): moderate to high
Depth to seasonal high water table: greater than 72 inches deep
Root zone: mainly to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Soil Properties of the Hogback soils—

Permeability: moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 10 to 20 inches

Most areas of this unit are in woodland.

This unit is not suited to growing cultivated crops and hay because of very steep slopes and bedrock ledges.

This unit is poorly suited to pasture. Very steep slopes make this unit highly susceptible to soil erosion in heavily traveled areas. Pasture maintenance is severely limited by slope and bedrock ledges. Rotational grazing, deferred grazing, and proper stocking rates are good management practices that should be considered.

The potential productivity for growing sugar maple on Rawsonville soils is moderate. The potential productivity for growing red spruce on Hogback soils is high. Slick soils and very steep slopes make mechanized equipment use impractical or unsafe in most areas. This unit is susceptible to severe soil erosion. Minimizing tree thinning and routing roads around this unit will help control erosion. There is also a severe windthrow hazard in areas of Hogback soils because of shallow tree root growth.

The main limitations if this unit is used as a site for dwellings are very steep slopes and depth to bedrock. A better suited site on deeper, less sloping soils should be considered.

The main limitations if this unit is used as a site for local roads and streets are depth to bedrock and very steep slopes. Roads should be routed around areas of this unit because of these severe limitations. Blasting of rock will be necessary in some areas of this unit for new road construction.

The main limitations if this unit is used as a site for septic tank absorption fields are slope and depth to bedrock. A better suited site should be considered. Conventional septic system designs will perform poorly on this unit. Alternative systems that augment the filtering capacity of this system should be considered.

The main limitations if this unit is used as a site for shallow excavations are very steep slopes and depth to bedrock. Excavations should be routed around this unit to avoid high costs and unsafe conditions for workers. Use of most heavy equipment will be hazardous. Blasting of bedrock will be necessary in most areas.

Capability subclass is 7s.

943C—Rawsonville-Borosaprists-Ricker complex, 0 to 25 percent slopes, very rocky

This map unit consists of soils formed in glacial till on mostly convex, bedrock controlled landforms intermingled with slight depressions. Moderately deep, well drained Rawsonville soils are typically on gently sloping to moderately steep knolls and ridges underlain by bedrock. Very deep, very poorly drained Borosaprists formed in organic deposits on bogs and other slight depressions. The Ricker soils are very shallow to moderately deep, well drained organic soils on the sides and tops of ridges underlain by bedrock. Rock outcrops make up 2 to 10 percent of the surface of this unit. Boulders cover up to 3 percent of the ground surface. Areas of this map unit consist of about 40 percent Rawsonville soils, 20 percent Borosaprists, 15 percent Ricker soils, and 25 percent other soils including bedrock outcrops. Rawsonville, Borosaprists, and Ricker soils are so intermingled that it was not practical to map them separately. Slopes are generally in a complex pattern. Borosaprists have slopes ranging from 0 to 2 percent.

The typical sequence, depth, and composition of the layers of the Rawsonville soil are as follows—

Surface layer:
0 to 1 inch, black highly decomposed leaves
1 to 3 inches, black loam

Subsurface layer:
3 to 4 inches, reddish gray fine sandy loam

Subsoil:
4 to 10 inches, dark reddish brown loam
10 to 20 inches, reddish brown fine sandy loam
20 to 22 inches, brown fine sandy loam
22 to 26 inches, dark yellowish brown fine sandy loam with few mottles
26 inches, crystalline bedrock

Borosaprists are highly variable and therefore do not have typical depths for layers. However, the layers generally have the following sequence and composition—

Surface layer:
0 to 7 inches, dark brown mucky peat

Subsurface layer:
7 to 30 inches, black to very dark brown muck

Substratum:
30 to 72 inches, gray fine sandy loam or silt loam

The typical sequence, depth, and composition of the layers of the Ricker soil are as follows—

Surface layer:
0 to 3 inches, black slightly decomposed moss, twigs, and needles
3 to 5 inches, black mucky peat
5 to 6 inches, black muck

Subsurface layer:
6 to 7 inches, dark grayish brown loam
7 inches, crystalline bedrock

Included with this unit in mapping are about 10 percent shallow, well drained Hogback soils on ridgetops and near bedrock outcrops. About 5 percent of this unit consists of somewhat poorly drained Worden and very poorly drained Sabattis soils on footslopes, toeslopes, and seep areas below bedrock escarpments. Small areas

of somewhat poorly drained; shallow soils are on slightly concave spots near Rawsonville soils. Small areas of shallow to moderately deep organic soils are adjacent to areas of Borosaprists. Included areas make up about 25 percent of this unit and range up to 40 acres each.

Soil Properties of the Rawsonville soils—

Permeability: moderate or moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): moderate to high
Depth to seasonal high water table: greater than 72 inches deep
Root zone: mainly to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Soil Properties of the Borosaprists soils—

Permeability: moderately slow to moderately rapid in the organic material, and generally moderately slow to rapid in the mineral substratum
Available water capacity (average for a 40-inch profile): high
Depth to seasonal high water table: 12 inches above the surface to 6 inches deep at some time from September through July
Root zone: mainly to 12 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil properties of the Ricker soils—

Permeability: moderately slow to moderately rapid in the surface organic layer, moderately rapid in the underlying organic layers, and moderate or moderately rapid in the mineral subsurface layer
Available water capacity (average for a 40-inch profile): low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 2 to 26 inches

Most areas of this unit are used as woodland or other native vegetation.

This mapping unit is generally unsuited for cultivated crops or hayland because of the seasonal high water table in areas of Borosaprists, the thin soil layer in Ricker soils, the complex pattern of slopes, and bedrock outcrops. Areas of Rawsonville soils have a more favorable rooting environment; but, these soils tend to be on strongly sloping or moderately steep, very bouldery slopes. Soil erosion can be a serious management problem where vegetation is disturbed.

This map unit is poorly suited to pasture because of the seasonal high water table in areas of Borosaprists and the high organic matter content in areas of both Borosaprists and Ricker soils. The extreme wetness of Borosaprists severely limits the growing season and survival of most common forage species. These organic soils have low soil strength especially when wet under browsing livestock. Soil erosion can be a management concern on both areas of Ricker and Rawsonville soils if they are overgrazed or grazed when wet.

The potential productivity for growing sugar maple is moderate on areas of Rawsonville soils. The potential productivity for growing black spruce on Borosaprists is moderate. The potential productivity for growing red spruce is moderate on Ricker soils. Woodland management is complicated by the extreme range of soil conditions across this unit. Soil erosion can commonly occur on both strongly sloping and moderately steep areas of this unit where vegetation is disturbed. Placing logging

roads and skid trails on the contour of the landform will help control erosion. The seasonal high water table (in areas of Borosaprists) limits use of heavy equipment during spring and other wet periods. Logging during dry periods or during frozen ground conditions can circumvent wetness problems. Ricker soils have low available water capacity, causing moderate to severe seedling mortality during drought periods. Proper selection of adaptable varieties for droughtiness in areas of Ricker soils and for too much wetness in areas of Borosaprists is important to achieve good productivity within areas of this map unit. There is a severe windthrow hazard because restricted root growth in areas of Ricker and Borosaprists soils. Minimal thinning and nurturing shallow rooted varieties are ways to alleviate windthrow.

The main limitations if this map unit is used as a site for dwellings are the depth to bedrock in areas of Rawsonville and Ricker soils, low bearing strength in areas Ricker soils and Borosaprists, and ponding in areas of Borosaprists. A better suited site should be considered such as deeper, lower elevation areas. Dwellings can be built above bedrock and landscaped with additional fill in areas of Rawsonville soils.

The main limitations if this unit is used as a site for local roads and streets are frost action in areas of Rawsonville soils, depth to bedrock in areas of Rawsonville and Ricker soils, and ponding in areas of Borosaprists. Using coarse grained subgrade material and providing adequate drainage will help reduce pavement damage due to frost heaving. Blasting of rock will probably be necessary in some areas to allow for proper road grade. Planning road locations and grades so that bedrock exposures are avoided will help reduce the need for blasting.

The main limitations if this unit is used as a site for septic tank absorption fields are depth to bedrock in areas of Rawsonville and Ricker soils, and ponding in areas of Borosaprists. A better suited site should be considered for most areas of this map unit. Conventional septic system designs will perform poorly overall. Alternative designs that augment the filtering capacity of this system should be considered for most areas.

The main limitations if this unit is used as a site for shallow excavations is the depth to bedrock in areas of Rawsonville and Ricker soils, the high organic matter in areas of Ricker soils and Borosaprists, and ponding in areas of Borosaprists. Excavations should be routed around this unit if possible. Digging will be difficult because of hard bedrock possibly requiring blasting in many areas. Work may be restricted to dry periods of the year in areas of Borosaprists unless drainage is provided. Sloughing of soil in the excavated area will also likely occur because of wetness and the high organic matter content. Trench walls should be mechanically supported to prevent collapse on workers or other possible victims.

The capability subclass is 6s for Rawsonville, 8 for Borosaprists, and 7s for Ricker.

945F—Hogback-Ricker complex, 35 to 60 percent slopes, very rocky

This map unit consists of very steep soils on the sides of high elevation mountains and ridges. Shallow, well drained Hogback soils formed in loamy glacial till over bedrock. The very shallow to moderately deep, well drained Ricker soils formed in mostly organic deposits over bedrock. Rock outcrops make up 2 to 10 percent of the surface of this unit. Boulders cover up to 3 percent of the ground surface. Typically, this map unit consists of about 45 percent Hogback soils, 30 percent Ricker soils, and 25 percent other soils including rock outcrop. Hogback and Ricker soils are so intermingled that it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Hogback soil are as follows—

Surface layer:
1 inch thick layer of undecomposed needles, leaves, and twigs
0 to 1 inch, black fine sandy loam

Subsurface layer:
1 to 6 inches, reddish gray loamy fine sand

Subsoil:
6 to 11 inches, black fine sandy loam
11 to 14 inches, dark reddish brown gravelly fine sandy loam
14 inches, crystalline bedrock

The typical sequence, depth, and composition of the layers of the Ricker soil are as follows—
Surface layer:
0 to 3 inches, black slightly decomposed moss, twigs, and needles
3 to 5 inches, black mucky peat
5 to 6 inches, black muck

Subsurface layer:
6 to 7 inches, dark grayish brown loam
7 inches, crystalline bedrock

Included in this map unit are about 5 percent moderately deep Rawsonville soils on lower side slopes. About 5 percent are very deep Mundalite soils near footslopes. About 10 percent of this unit includes Hogback and Ricker soils on strongly sloping to steep slopes. Also included are small areas with greater than 10 percent bedrock exposures. Included areas make up about 25 percent of this unit and range up to 40 acres each.

Soil Properties of the Hogback soils—

Permeability: moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 10 to 20 inches

Soil Properties of the Ricker soils—

Permeability: moderately slow to moderately rapid in the surface organic layer, moderately rapid in the underlying organic layers, and moderate or moderately rapid in the mineral subsurface layer
Available water capacity (average for a 40-inch profile): low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 2 to 26 inches

Most areas of this unit are used as woodland.
This unit is not suited to growing cultivated crops and hay because of very steep slopes and bedrock outcrops including ledge.
This unit is not suited to pasture. The growing season is too short for most forage species. Soil erosion is a critical concern on any pastured area of this unit because of thin soil layers high in organic material. Droughtiness may also limit forage development.

The potential productivity for growing red spruce on Hogback soils is high. The potential productivity for growing red spruce on Ricker soils is moderate. Very steep slopes make mechanized operations impractical or hazardous in most places. Soil erosion is a severe hazard on disturbed areas because of thin soils with very steep slopes and high organic matter. Also, shallow root growth creates a severe windthrow hazard especially in areas of excess thinning.

The main limitations if this unit is used as a site for dwellings are very steep slopes, depth to bedrock, and low soil strength in areas of Ricker soils. A better suited site should be considered. These very steep slopes will require extensive grading and landscaping expenses. Designing the dwelling to conform to the natural slope will save on some of the construction and maintenance costs.

The main limitations if this unit is used as a site for local roads and streets are depth to bedrock, very steep slopes, and frost action. Roads should be routed around this unit where possible. Blasting of rock will be necessary in most areas of this unit for road grade. Using coarse-grained material as subgrade will diminish pavement damage from frost heaving. Routing new roads along the contour will help reduce construction costs. However, costs of grading and landscaping will be high for this unit in comparison to deeper, lesser sloping map units.

The main limitations if this unit is used as a site for septic tank absorption fields are very steep slopes and depth to bedrock. A better suited site should be considered for this use. Because of the very steep slopes and thin soil layer, there is a severe risk of seepage of effluent to the surface if a septic field is placed on areas of this unit.

The main limitations if this unit is used as a site for shallow excavations are very steep slopes, depth to bedrock, and the high organic matter content in areas of Ricker soils. Maneuvering equipment will be difficult and hazardous in most areas. Also, blasting will be necessary for excavations in most areas of this unit.

Capability subclass is 7s.

949F—Rock outcrop-Ricker-Hogback complex, 35 to 60 percent slopes, very bouldery

This map unit consists of very steep, bedrock outcrops and soils on the sides of mountains and ridges. Very shallow to moderately deep, well drained Ricker soils formed in mostly organic deposits over bedrock. The shallow, well drained Hogback soils formed in loamy glacial till over bedrock. Boulders cover up to 3 percent of the ground surface. Typically, this map unit consists of about 30 percent rock outcrop, 25 percent Ricker soils, 25 percent Hogback soils, and 20 percent other soils. Rock outcrops, Ricker soils, and Hogback soils are so intermingled that it was not practical to map them separately (fig. 10).

The typical sequence, depth, and composition of the layers of the Ricker soil are as follows—

Surface layer:
0 to 3 inches, black slightly decomposed moss, twigs, and needles
3 to 5 inches, black mucky peat
5 to 6 inches, black muck

Subsurface layer:
6 to 7 inches, dark grayish brown loam
7 inches, crystalline bedrock

The typical sequence, depth, and composition of the layers of the Hogback soil are as follows—

Surface layer:
1 inch thick layer of undecomposed needles, leaves, and twigs
0 to 1 inch, black fine sandy loam

Figure 10. —A view of the Silver Lake Mountains in the Town of Black Brook shows a feature created by physical weathering. These ledges are called exfoliation domes (Denny, 1974) and are dominated by the Rock outcrop - Ricker - Hogback complex. At the base of these ledges is an area of the Becket - Tunbridge complex. In the foreground, the very deep, well drained Becket soils have a dense substratum about two feet below the surface.

Subsurface layer:
1 to 6 inches, reddish gray loamy fine sand

Subsoil:
6 to 11 inches, black fine sandy loam
11 to 14 inches, dark reddish brown gravelly fine sandy loam
14 inches, crystalline bedrock

Included in this map unit are about 5 percent moderately deep Rawsonville soils between ridges and on lower side slopes. About 5 percent are very deep Mundalite soils near footslopes. Also included are areas of strongly sloping to steep Hogback and Ricker soils. Included areas make up about 20 percent of this unit and range up to 40 acres each.

Soil Properties of the Ricker soils—

Permeability: moderately slow to moderately rapid in the surface organic layer, moderately rapid in the underlying organic layers, and moderate or moderately rapid in the mineral subsurface layer
Available water capacity (average for a 40-inch profile): low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 2 to 26 inches

Soil Properties of the Hogback soils—

Permeability: moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 10 to 20 inches

Most areas of this unit are in woodland.

This unit is not suited to growing cultivated crops and hay because of the very steep slopes and bedrock ledge and outcrops.

This unit is not suited to pastures because of the very steep slopes and bedrock ledge and outcrops.

The potential productivity for growing red spruce on areas of Ricker soils is moderate. The potential productivity for growing red spruce on areas of Hogback soils is high. Bedrock ledges and very steep slopes make mechanized operations impractical or hazardous in most areas of this unit. Soil erosion is also a severe hazard on disturbed areas because of thin soils with very steep slopes and high organic matter. Also, shallow root growth creates a severe windthrow hazard.

The main limitations if this unit is used as a site for dwellings are very steep slopes, depth to bedrock and bedrock ledges, and low strength in areas of Ricker soils. A better suited site should be considered.

The main limitations if this unit is used as a site for local roads and streets are depth to bedrock, very steep slopes, and frost action. Roads should be routed around this unit where possible. Blasting of rock will be necessary in most areas of this unit for road grade. Using coarse grained material as subgrade will diminish pavement damage from frost heaving.

The main limitations if this unit is used as a site for septic tank absorption fields are very steep slopes, depth to bedrock and bedrock ledges. A better suited site should be considered for this use.

The main limitations if this unit is used as a site for shallow excavations are bedrock ledges, very steep slopes, depth to bedrock, and the high organic matter content in areas of Ricker soils. Maneuvering equipment will be impractical and hazardous in most areas. Also, blasting will be necessary for excavations in most areas of this unit.

Capability subclass is 7s

991D—Glebe-Skylight complex, 15 to 35 percent slopes, very rocky

This map unit consists of moderately steep and steep soils on high elevation mountains in western Clinton County. Moderately deep and deep, well drained Glebe soils generally occur between convex ridges and on slopes between bedrock outcrops. Very shallow and shallow, somewhat excessively drained Skylight soils generally occur on ridges and near bedrock outcrops. Exposed bedrock makes up 2 to 10 percent of the surface of this unit. Boulders cover up to 3 percent of the ground surface. This map unit consists of 55 percent Glebe soils, 30 percent Skylight soils, and 15 percent other soils. Glebe and Skylight soils are so intermingled that it was not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Glebe soil are as follows—

Surface layer:
2 inches thick layer of undecomposed sphagnum moss
0 to 1 inches, black highly decomposed organic material

Subsoil:
1 to 12 inches, dark reddish brown gravelly coarse sandy loam
12 to 19 inches, dark brown gravelly fine sandy loam
19 to 24 inches, brown stony loamy coarse sand
24 inches, anorthosite bedrock

The typical sequence, depth, and composition of the layers of the Skylight soil are as follows—
Surface layer:
0 to 2 inches, dark reddish brown moderately decomposed needles, leaves and twigs
2 to 5 inches, black highly decomposed organic material

Subsurface layer:
5 to 9 inches, dark gray loamy sand

Subsoil:
9 to 15 inches, black loamy sand
15 inches, anorthosite bedrock

Included with this unit in mapping are about 5 percent Ricker soils having shallow or moderately deep organic deposits over bedrock. About 5 percent of this unit is well drained loamy and less sandy mineral soils in very shallow areas near bedrock outcrops. Also included are extremely bouldery soils and shallow or moderately deep, somewhat poorly drained areas. Included areas make up about 15 percent of this unit and range up to 40 acres each.

Soil Properties of the Glebe soils—

Permeability: moderately rapid throughout the mineral soil
Available water capacity (average for a 40-inch profile): high
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to 20 inches deep or more
Shrink-swell potential: low
Depth to bedrock: 20 to 60 inches

Soil Properties of the Skylight soils—

Permeability: moderately slow to moderately rapid in the organic mantle, and moderately rapid below
Available water capacity (average for a 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 4 to 19 inches

Areas of this map unit are in woodland.

This unit is poorly suited to growing cultivated crops and hay. This area of the county has a very short growing season. Bedrock outcrops and surface boulders obstruct tillage and equipment use. Soil erosion can be a serious problem because of the moderately steep and steep slopes. Also, root growth is limited in areas of Skylight soils by depth to bedrock causing stunted vegetation.

This unit is poorly suited to pasture. Moderately steep and steep slopes, bedrock outcrops, surface boulders and a very short growing season make this soil difficult to manage for good forage. Soil erosion can be a very serious problem in heavily grazed areas. Overgrazing should be avoided.

The potential productivity for growing red spruce on areas of Glebe soils is moderately high. The potential productivity for growing balsam fir on areas of Skylight soils is moderate. Soil erosion can be severe on these moderately steep and steep soils

where the ground cover is disturbed. Because of shallow root growth particularly in areas of Skylight soils, windthrow can also be a severe management problem. Having logging roads and skid trails routed along the contour of the land, installing water bars, and limiting tree thinning are practices that will help to reduce these limitations.

The main limitations if this unit is used as a site for dwellings with basements are depth to bedrock and steep slope. Areas of deeper Glebe soils will likely be better suited to dwellings with basements. However, if this area is used, landscaping with fill material will probably be necessary around the basement. Because of moderately steep and steep slopes, dwellings oriented along the contour of the slope will help to reduce landscaping costs.

The main limitations if this unit is used as a site for local roads and streets are moderately steep and steep slopes and frost action. Significant savings in construction costs can be realized if roads are built along the contour of the slope. Coarse-grain fill material for subgrade as well as adequate drainage will limit potential frost action.

The main limitations if this unit is used as a site for septic tank absorption fields are depth to bedrock and slope. A better suited site should be considered such as a nearby less sloping, very deep soil. Conventional septic system designs may perform poorly on many areas of this map unit. Alternative systems that augment the filtering capacity of this system should be considered.

The main limitations if this unit is used as a site for shallow excavations are depth to bedrock and slope. Bedrock outcrops may inhibit the use of conventional excavation equipment and require blasting. Most areas of this moderately steep and steep map unit will limit machinery use as a result of efficiency and safety considerations.

The capability subclass is 7s.

997F—Ricker-Skylight-Rock outcrop complex, 35 to 70 percent slopes, very bouldery

This map unit consists of very steep soils on the sides of high elevation mountains in western Clinton County. Very shallow to moderately deep, well drained Ricker soils formed in mostly organic deposits over bedrock. The very shallow and shallow, somewhat excessively drained Skylight soils formed in sandy glacial till over bedrock. Boulders cover up to 3 percent of the ground surface. Typically, this map unit consists of about 35 percent Ricker soils, 30 percent Skylight soils, about 25 percent bedrock outcrop, and about 10 percent other soils. Ricker soils, Skylight soils, and bedrock outcrop areas are so intermingled that it was not practical to map them separately.

The typical sequence, depth and composition of the layers of the Ricker soil are as follows—

Surface layer:
0 to 3 inches, black slightly decomposed moss, twigs, and needles
3 to 5 inches, black mucky peat
5 to 6 inches, black muck

Subsurface layer:
6 to 7 inches, dark grayish brown loam
7 inches, crystalline bedrock

The typical sequence, depth and composition of the layers of the Skylight soil are as follows—

Surface layer:
0 to 2 inches, dark reddish brown moderately decomposed needles, leaves and twigs
2 to 5 inches, black highly decomposed organic material

Subsurface layer:
5 to 9 inches, dark gray loamy sand

Subsoil:
9 to 15 inches, black loamy sand
15 inches, anorthosite bedrock

Included with this unit in mapping are about 5 percent soils similar to Skylight except lacking signs of soil development. Small areas of soils similar to moderately deep Rawsonville soils are included. Also included are small areas of Ricker and Skylight soils on moderately steep and steep slopes. Included areas make up about 10 percent of this unit and range up to 40 acres each.

Soil Properties of the Ricker soils—

Permeability: moderately slow to moderately rapid in the surface organic layer, moderately rapid in the underlying organic layers, and moderate or moderately rapid in the mineral subsurface layer
Available water capacity (average for a 40-inch profile): low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 2 to 26 inches

Soil Properties of the Skylight soils—

Permeability: moderately slow to moderately rapid in the organic mantle, and moderately rapid below
Available water capacity (average for a 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 4 to 19 inches

All areas of this unit are in woodland.

This unit is not suited to growing cultivated crops and hay because of the very steep slopes, bedrock ledges and surface boulders

This unit is not suited to pasture because of very steep slopes, bedrock ledges and surface boulders.

The potential productivity for growing red spruce on areas of Ricker soils is moderate. The potential productivity for growing balsam fir on areas of Skylight soils is moderate. Very steep slopes make mechanized operations impractical or hazardous in most places. There is a severe erosion hazard on disturbed areas of this unit because of thin soils with very steep slopes and high organic matter. Also, shallow root growth allows for a severe windthrow hazard especially in areas of excess thinning. Seedling mortality is generally severe because of the low available water holding capacity.

The main limitations if this unit is used as a site for dwellings are very steep slopes and depth to bedrock. A better suited site should be considered.

The main limitations if this unit is used as a site for local roads and streets are the very steep slopes and depth to bedrock. Roads should be routed around this unit whenever possible.

The main limitations if this unit is used as a site for septic tank absorption fields are the very steep slope and depth to bedrock. A better suited site should be considered for this use.

The main limitations if this unit is used as a site for shallow excavations are the very steep slope and depth to bedrock. Work should be routed around this area

where possible. Maneuvering conventional digging equipment on most areas of this unit will be impractical and unsafe. Blasting will also be necessary for excavations in most areas

The capability subclass is 7s.

AbA—Adams loamy sand, 0 to 3 percent slopes

This map unit consists of very deep, nearly level, and somewhat excessively drained soils on nearly level sandy glacial outwash plains and terraces.

The typical sequence, depth and composition of the layers of this soil are as follows—

Surface layer:
0 to 7 inches, very dark grayish brown loamy sand

Subsurface layer:
7 to 9 inches, pinkish gray sand

Subsoil:
9 to 11 inches, dark reddish brown loamy sand
11 to 13 inches, dark brown loamy sand
13 to 27 inches, strong brown sand

Substratum:
27 to 35 inches, yellowish brown fine sand
35 to 72 inches, brown sand

Included with this soil in mapping are about 5 percent moderately well drained Croghan soils in slight depressions and along shallow drainageways. About 5 percent excessively drained Colton soils are included in areas of high gravel content near streams and valley side slopes. Also included are similar soils having thin layers of very fine sand or silt in the substratum and soils lacking stratification in the substrata. In some areas the surface texture is sand, fine sand, or loamy fine sand. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the surface and subsoil, and very rapid in the substratum
Available water capacity (average for 40-inch profile): very low or low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 72 inches

Most areas of this soil are in woodland. The majority of areas that were once farmed have since reverted to brush and woodland.

This soil is moderately suited to growing cultivated crops and hay. Droughtiness can limit productivity of this soil because of the very low available water capacity. Amendments of organic matter will improve the moisture holding ability and soil structure. Because of the rapid permeability in this soil, the potential for pesticide loss from leaching in this soil is high. Conservation tillage systems, crop rotation, and the proper application of manure and other soil amendments are good management practices on this soil.

This soil is moderately suited to pasture. Droughtiness can affect the quantity and quality of forage. Rotational grazing and proper stocking rates are good management practices.

The potential productivity for growing eastern white pine on this soil is very high. Because of the very low available water capacity, this soil can be droughty and

therefore, severely affect seedling mortality. Included areas of Croghan soils may have lower seedling mortality.

There are no major limitations for dwellings with or without basements on this soil.

There are no major limitations for local roads and streets on this soil.

The main limitation if this map unit is used as a site for septic tank absorption fields is the soil's poor ability to filter effluent properly. There is a possibility of ground water contamination because of the soil's rapid permeability. A better suited site should be considered for this use such as a moderately rapid, permeable soil on a nearby landform.

The main limitation if this map unit is used as a site for shallow excavations is the danger of cut banks caving in. Precautions can be taken to protect workers and other possible victims.

The capability subclass is 3s.

AbB—Adams loamy sand, 3 to 8 percent slopes

This very deep, gently sloping, and somewhat excessively drained soil occurs on sandy glacial outwash plains and terraces.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 7 inches, very dark grayish brown loamy sand

Subsurface layer:
7 to 9 inches, pinkish gray sand

Subsoil:
9 to 11 inches, dark reddish brown loamy sand
11 to 13 inches, dark brown loamy sand
13 to 27 inches, strong brown sand

Substratum:
27 to 35 inches, yellowish brown fine sand
35 to 72 inches, brown sand

Included with this soil in mapping are about 5 percent moderately well drained Croghan soils in slight depressions and along shallow drainageways. About 5 percent excessively drained Colton soils are included in areas of high gravel content near streams and valley side slopes. Also included are similar soils having thin layers of very fine sand or silt in the substratum and soils lacking stratification in the substrata. Narrow inclusions of more sloping areas are included. In some areas the surface texture is sand, fine sand, or loamy fine sand. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the surface and subsoil, and very rapid in the substratum
Available water capacity (average for 40-inch profile): very low or low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 72 inches

Most areas of this soil are in woodland. The majority of areas that were once farmed have since reverted to brush and woodland.

This soil is moderately suited to growing cultivated crops and hay. Droughtiness can limit productivity of this soil because of the very low available water capacity.

Amendments of organic matter will improve the moisture holding ability and soil structure. Erosion may also be a management problem on long slopes resulting in reduced crop yields. Because of the rapid permeability in this soil, the potential for pesticide loss from leaching in this soil is high. Conservation tillage systems, crop rotation, manuring, the use of cover crops, and the proper application of soil amendments are good management practices on this soil.

This soil is moderately suited to pasture. Droughtiness can negatively affect the quantity and quality of forage. Rotational grazing and proper stocking rates are good management practices on this soil.

The potential productivity for growing eastern white pine on this soil is very high. Because of the very low available water capacity, this soil can be very droughty and therefore, severely affect seedling mortality. Included areas of Croghan soils may have lower seedling mortality.

There are no major limitations for dwellings with and without basements on this soil.

There are no major limitations for local roads and streets on this soil.

The main limitation if this map unit is used as a site for septic tank absorption fields is the poor ability of the soil to filter effluent properly. There is a possibility of ground water contamination because of the soil's rapid permeability. A better suited site should be considered for this use such as a moderately rapid, permeable soil on a nearby landform.

The main limitation if this map unit is used as a site for shallow excavations is the danger of cut banks caving in. Precautions should be taken to protect workers and other possible victims.

The capability subclass is 3s.

AbC—Adams loamy sand, 8 to 15 percent slopes

This very deep, strongly sloping, and somewhat excessively drained soil occurs on side slopes of sandy outwash plains and terraces.

The typical sequence, depth and composition of the layers of this soil are as follows—

Surface layer:
0 to 7 inches, very dark grayish brown loamy sand

Subsurface layer:
7 to 9 inches, pinkish gray sand

Subsoil:
9 to 11 inches, dark reddish brown loamy sand
11 to 13 inches, dark brown loamy sand
13 to 27 inches, strong brown sand

Substratum:
27 to 35 inches, yellowish brown fine sand
35 to 72 inches, brown sand

Included with this soil in mapping are about 5 percent excessively drained Colton soils in areas of high gravel content near streams and valley side slopes. About 5 percent of this unit includes Monadnock and Becket soils and other areas of similar soil lacking stratification in the substrata. Also included are areas similar to Nicholville soils having layers of very fine sand or silt in the subsoil or substratum. Narrow inclusions of steeper slopes are included. Also in some areas, the surface texture is sand, fine sand, or loamy fine sand. Included areas make up about 15 percent of this map unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the surface and subsoil, and very rapid in the substratum
Available water capacity (average for 40-inch profile): very low or low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 72 inches

Most areas of this soil are in woodland and brush.

This soil generally is poorly suited to growing cultivated crops and hay. Droughtiness can significantly limit productivity of this soil because of the very low available water capacity. Amendments of organic matter will improve the moisture holding ability and soil structure. The hazard of erosion is also a limiting factor on this strongly sloping soil. Because of rapid permeability in this soil, the potential for pesticide loss from leaching in this soil is high. Conservation tillage systems, crop rotation, stripcropping, manuring, and the proper application of soil amendments are good management practices on this soil.

This soil is poorly suited to pasture. Droughtiness can seriously affect the quantity and quality of forage. Key pasture plants should be tolerant of dry soil conditions during most of the growing season. Overgrazing can reduce potential forage production and enhance competition from weed species. Rotational grazing, proper stocking rates, and yearly mowing are good management practices on this soil.

The potential productivity for growing eastern white pine on this soil is very high. Because of the very low available water capacity, droughtiness can severely affect seedling mortality.

Because of the strongly sloping topography, this soil is moderately limited for dwellings with and without basements. Some grading or leveling will likely be needed in most areas of this soil compared to lesser sloping areas. Erosion can be a significant problem at construction sites because of slope conditions.

This soil is moderately limited for local roads and streets because of strongly sloping conditions. Adapting new roadways to the natural slope along with land grading can help minimize this limitation.

The main limitation if this soil is used as a site for septic tank absorption fields is the poor ability to filter effluent properly. There is a possibility of ground water contamination because of the soil's very rapid permeability. A better suited site should be considered for this use such as a moderately rapid, permeable soil on a nearby landform.

The main limitation of this soil for shallow excavations is the danger of cut banks caving in. Precautions should be taken to protect workers and other possible victims.

The capability subclass is 4e.

AbD—Adams loamy sand, 15 to 25 percent slopes

This very deep, moderately steep, and somewhat excessively drained soil is on hillsides and side slopes of outwash plains and terraces.

The typical sequence, depth and composition of the layers of this soil are as follows—

Surface layer:
0 to 7 inches, very dark grayish brown loamy sand

Subsurface layer:
7 to 9 inches, pinkish gray sand

Subsoil:
9 to 11 inches, dark reddish brown loamy sand

11 to 13 inches, dark brown loamy sand
13 to 27 inches, strong brown sand

Substratum:
27 to 35 inches, yellowish brown fine sand
35 to 72 inches, brown sand

Included with this soil in mapping are about 5 percent excessively drained Colton and Hermon soils in areas of high gravel content near streams and valley side slopes. About 5 percent of this unit includes Monadnock, Becket and Fernlake soils in areas lacking stratification in the substrata. Narrow inclusions of steeper slopes are included. Also in some areas, the surface texture is sand, fine sand, or loamy fine sand. Included areas make up about 15 percent of this map unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the surface and subsoil, and very rapid in the substratum.
Available water capacity (average for 40-inch profile): very low or low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 72 inches

Most areas of this soil are in woodland and brush.

This soil is generally poorly suited to growing cultivated crops and hay. Erosion is a potential management problem because of the moderately steep topography. Droughtiness can significantly limit productivity of this soil because of the very low available water capacity. Amendments of organic matter will improve the moisture holding ability and soil structure. Because of rapid permeability in this soil, the potential for pesticide loss from leaching in this soil is high. Conservation tillage systems, crop rotation, stripcropping, manuring, and the proper application of soil amendments are good management practices on this soil.

This soil is poorly suited to pasture. Droughtiness can seriously affect the quantity and quality of forage. Key pasture plants should be tolerant of dry soil conditions during most of the growing season. Overgrazing can reduce potential forage production and enhance competition from weed species. Rotational grazing, proper stocking rates, and yearly mowing are good management practices on this soil.

The potential productivity for growing eastern white pine on this soil is very high. Because of the very low available water capacity, droughtiness can severely affect seedling mortality. Also, the moderately steep slopes may limit maneuverability of large equipment.

Because of the moderately steep topography, this soil is severely limited for dwellings with and without basements. Extensive grading or leveling will likely be needed in most areas of this unit in comparison to lesser sloping areas. Erosion can be a significant problem at construction sites because of slope conditions.

The main limitation if this map unit is used as a site for local roads and streets is moderately steep slopes. Constructing roads along the contour will reduce the slope limitation.

The main limitations if this unit is used as a site for septic tank absorption fields are moderately steep slopes and the soil's poor ability to filter effluent properly. A better suited site should be selected on a less sloping area with soils of moderately rapid permeability. There is a possibility of ground water contamination beneath these soils because of rapid permeability.

The main limitations if this unit is used as a site for shallow excavations are slope and the danger of cut banks caving in. Grading may be necessary before excavation.

Precautions should be taken to mechanically protect workers and other possible victims from soil collapse.

The capability subclass is 6e.

AgB—Adirondack loam, 3 to 8 percent slopes

This very deep, gently sloping, somewhat poorly drained soil is on footslopes, along drainageways, and in other slightly concave areas of upland till plains.

The typical sequence, depth, and composition of the layers of Adirondack soil are as follows—

Surface layer:
0 to 5 inches, dark brown loam

Subsoil:
5 to 12 inches, brown loam with few mottles
12 to 18 inches, brown fine sandy loam with common mottles
18 to 22 inches, light brownish gray gravelly fine sandy loam with common mottles

Substratum:
22 to 72 inches, firm, brown gravelly fine sandy loam with few mottles

Included with this soil in mapping are about 5 percent moderately well drained Skerry soils on high areas of the map unit. About 5 percent of this unit consists of poorly drained Lyonmounten soils and very poorly drained Sabattis soils in low areas, seeps, and along drainageways. Also included is about 5 percent somewhat poorly drained Peasleeville soils in areas which lack a dense substratum. Inclusions of Adirondack soils with a very stony surface are often in small areas of brush or woodland. Small areas that are moderately deep to bedrock are also included. In some areas the surface texture is fine sandy loam. Included soils make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface and subsoil, and slow in the substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: perched 12 to 18 inches deep at some time during November through May
Root zone: mainly to 20 inches deep or less
Shrink swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in hay or pasture. Some areas that were cleared are reverting to brush.

This soil is poorly suited to growing cultivated crops and hay. Without adequate drainage, the seasonal high water table may delay planting in the spring. Surface and subsurface drainage can significantly increase productivity and improve the efficiency of farm operations. Conservation tillage systems, crop rotation, maintenance of drainageways, and use of cover crops are good management practices.

This soil is moderately suited to pasture. The seasonal high water table may limit the growth of forage plants in the spring. Selecting plants which are tolerant of wet soil conditions will help sustain the quality and quantity of forage. Excessive grazing under wet soil conditions increases the potential for surface compaction and loss of desired plant species. Rotational grazing, deferred grazing, proper stocking rates, maintenance of drainageways, and yearly mowing are good management practices.

The potential productivity for growing balsam fir on this soil is high. Maneuvering heavy harvesting equipment over this soil may be difficult during wet periods. Rooting

depth is limited by the seasonal high water table and the dense substratum, which may restrict seedling growth and result in windthrow in some areas of this soil. Selecting shallow-rooted species that are tolerant of wet soil conditions will help increase seedling survival and reduce windthrow.

The main limitation if this map unit is used as a site for dwellings is the seasonal high water table. Better drained soils on higher inclusions or nearby units should be considered for this use. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this unit is used as a site for local roads and streets is frost action. Constructing roads on a raised bed of coarse grained material and providing adequate surface and subsurface drainage will decrease potential damage from frost action.

The main limitations if this unit is used as a site for septic tank absorption fields are the seasonal high water table and the slow percolation rate. A better suited site should be considered for this use. If this soil is used, an alternative design that augments the absorptive and filtering capacity of the system will be needed. Installing drainage around the filter field and diversion ditches to intercept water from higher areas will help alleviate some wetness.

The main limitations if this unit is used as a site for shallow excavations are the seasonal high water table and the possibility of soils caving in. Digging operations may have to be restricted to the drier periods of the year unless drainage is installed. Mechanical support of trench walls will help protect workers from possible cave in.

The capability subclass is 3w.

AhB—Adirondack loam, gently sloping, very bouldery

This very deep, somewhat poorly drained soil is on footslopes, along drainageways, and in other slightly concave areas of upland till plains. Boulders cover up to 3 percent of the soil surface. Slopes range from 0 to 8 percent.

The typical sequence, depth, and composition of the layers of Adirondack soil are as follows—

Surface layer:
0 to 5 inches, dark brown loam

Subsoil:
5 to 12 inches, brown loam with few mottles
12 to 18 inches, brown fine sandy loam with common mottles
18 to 22 inches, light brownish gray gravelly fine sandy loam with common mottles

Substratum:
22 to 72 inches, firm, brown gravelly fine sandy loam with few mottles

Included with this soil in mapping are about 5 percent moderately well drained Skerry soils on high areas of the map unit. About 5 percent of this unit consists of poorly drained Lyonmounten soils and very poorly drained Sabattis soils in low areas, seeps, and along drainageways. Also included is about 5 percent somewhat poorly drained Peasleeville soils in areas which lack a dense substratum. Small areas that are moderately deep to bedrock are also included. In some areas the surface texture is fine sandy loam. Included soils make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface and subsoil, and slow in the substratum
Available water capacity (average for 40-inch profile): moderate

Depth to seasonal high water table: perched 12 to 18 inches deep at some time during November through May
Root zone: mainly to 20 inches deep or less
Shrink swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in woodland or brush. Some areas are used for unimproved pasture.

This soil is poorly suited to growing cultivated crops and hay. Large surface stones are an obstruction to effective management and will cause excessive wear on machinery. Stone clearing is necessary to accommodate farm machinery use and to avoid significant damage and wear.

This soil is poorly suited to pasture. Large stones covering the surface inhibit yearly mowing and other maintenance practices. Overgrazing may lead to surface compaction during wet periods and loss of desired forage plants. Deferred grazing will help sustain key plant species. Stone removal, rotational grazing, proper stocking rates, and yearly mowing are also good pasture management practices.

The potential productivity for growing balsam fir on this soil is high. Maneuvering heavy harvesting equipment over this soil may be difficult during wet periods. Rooting depth is limited by the seasonal high water table and the dense substratum. This may restrict seedling growth and result in windthrow in some areas of this soil. Selecting shallow-rooted species that are tolerant of wet soil conditions will help increase seedling survival and reduce windthrow.

The main limitation if this soil for dwellings is the depth to seasonal high water table. Better drained soils on higher inclusions or nearby units should be considered for this use. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Constructing roads on a raised bed of coarse grained material and providing adequate surface and subsurface drainage will decrease potential damage from frost action.

The main limitations if this soil is used as a site for septic tank absorption fields are the depth to seasonal high water table and the slow percolation rate. A better suited site should be considered for this use. If this soil is used, an alternative design that augments the absorptive and filtering capacity of the system will be needed. Installing drainage around the filter field and diversion ditches to intercept water from higher areas will help alleviate some wetness.

The main limitations if this unit is used as a site for shallow excavations are the depth to seasonal high water table and the possibility of soils caving in. Digging operations may have to be restricted to the drier periods of the year unless drainage is installed. Mechanical support of trench walls will help protect workers from possible cave in.

The capability subclass is 6s.

Ak—Adjidaumo silty clay

This very deep, nearly level and poorly drained soil occurs on slightly depressional areas of glacial lake plains. Slopes range from 0 to 2 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—
Surface layer:
0 to 7 inches, black silty clay

Subsoil:
7 to 10 inches, dark gray silty clay
10 to 36 inches, dark gray silty clay

Substratum:
36 to 72 inches, grayish brown silty clay

Included with this soil in mapping are about 10 percent very poorly drained Adjidaumo soils near ponded areas and along drainageways. About 5 percent of this unit is somewhat poorly drained Muskellunge soils on slightly higher landscape positions. Small areas of very poorly drained Pinconning soils and somewhat poorly drained Swanton soils are included where sandy or loamy deposits occur over the clayey substratum. Also included are small areas of soils with less silt and sand in the subsoil. In some areas, the surface texture is clay or silty clay loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately slow in the surface, slow in the subsoil, and slow or very slow in the substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: at the surface to 6 inches below the surface at some time from November through June
Root zone: generally to 10 inches deep
Shrink-swell potential: moderate
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland or brush.

This soil is poorly suited to growing cultivated crops and hay because of the depth to seasonal high water table. The surface is saturated during the early growing season. Drainage systems may be expensive to install and maintain because their outlets can be difficult to establish without draining fragile wetland.

This soil is poorly suited to pasture. The seasonal high water table is near the surface during spring and early summer. Areas of this soil may not support typical pasture plant species because of wetness. Ground conditions are generally soft and susceptible to compaction from livestock. Drier areas should be considered for this use. Deferred grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing red maple on this soil is moderate. Because of the seasonal high water table, ground conditions are very soft in late fall and spring. These conditions limit the efficient use of harvesting equipment to mainly summer or winter. Since root growth is restricted by the depth to seasonal high water table, seedling mortality and windthrow will likely be severe on these areas.

The main limitation if this unit is used as a site for dwellings is the depth to seasonal high water table. A better suited site should be considered such as a higher position within this map unit.

The main limitations if this unit is used as a site for local roads and streets are low soil strength, frost action, and the depth to seasonal high water table. Roads can be designed to integrate special techniques to provide adequate road surface support. Adequate drainage can also be installed to lower the water table and lessen frost heave potential.

The main limitations if this map unit is used as a site for septic tank absorption fields are the depth to seasonal high water table and the slow permeability. A better suited site should be considered for this use such as a nearby higher position on the landscape.

The main limitation if this unit is used as a site for shallow excavations is the depth to seasonal high water table. Digging operations may be restricted to the drier periods of the year unless significant drainage is installed. Sloughing of soil may occur because of wetness.

The capability subclass is 4w.

Am—Adjidaumo mucky silty clay

This very deep, nearly level and very poorly drained soil occurs in basin-like areas on glacial lake plains. Slopes range from 0 to 2 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 7 inches, black mucky silty clay

Subsoil:
7 to 10 inches, dark gray silty clay
10 to 36 inches, dark gray silty clay

Substratum:
36 to 72 inches, grayish brown silty clay

Included with this soil in mapping are about 5 percent poorly drained Adjidaumo soils along the perimeter of basin-like positions. About 5 percent of this unit is somewhat poorly drained Muskellunge soils on higher positions. Small areas of very poorly drained Pinconning soils are included where sandy deposits occur over the clayey substratum. Also included are small areas of very poorly drained Wonsqueak soils where thicker organic surface deposits occur. There are also small areas of soils with less silt and sand in the subsoil. In some areas, the surface texture is mucky clay or mucky silty clay loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately slow in the surface, slow in the subsoil, and slow or very slow in the substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 12 inches above the surface to 6 inches below the surface from November through June
Root zone: generally up to 10 inches deep
Shrink-swell potential: moderate
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland or brush.

This soil is poorly suited to growing cultivated crops and hay because of the seasonal high water table or ponding. Drainage systems may be expensive to install and maintain because outlets can be very difficult to establish without draining fragile wetland.

This soil is poorly suited to pasture. The seasonal high water table is near the surface or covers the surface during the early growing season. Areas of this soil will not support most typical forage species. Ground conditions are generally soft and susceptible to compaction from livestock. Drier areas should be considered for this use.

The potential productivity for growing red maple on this soil is moderate. Because of the seasonal high water table, ground conditions are very soft particularly during spring. These conditions limit the efficient use of harvesting equipment mainly to

summer or winter. Since root growth is restricted by the depth to seasonal high water table, seedling mortality, and windthrow will likely be severe on these areas.

The main limitation if this unit is used as a site for dwellings is ponding or the existence of a seasonal high water table. A better suited site should be considered such as a higher position near this map unit.

The main limitations of this soil for local roads and streets are low soil strength, frost action, and ponding. Road designs can integrate special techniques to provide adequate road surface support. Designing a subgrade having an adequate thickness of coarse grain material is one example. Additional drainage may be necessary to lower the water table and lessen frost heave potential.

The main limitations if this unit is used as a site for septic tank absorption fields are ponding and slow permeability. A better suited site should be considered for this use.

The main limitation if this unit is used as a site for shallow excavations is ponding. Digging operations will be restricted to dry periods of the year unless significant drainage is installed. Sloughing of soil may occur because of wetness.

The capability subclass is 5w.

AtA—Amenia fine sandy loam, 0 to 3 percent slopes

This very deep, nearly level and moderately well drained soil occurs on glacial till lowlands.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, dark brown fine sandy loam

Subsoil:
9 to 16 inches, brown fine sandy loam
23 to 28 inches, dark grayish brown gravelly fine sandy loam with few mottles

Substratum:
28 to 36 inches, dark grayish brown loam with common mottles
36 to 72 inches, grayish brown loam with common mottles

Included with this soil in mapping are about 5 percent somewhat poorly drained Massena soils on slightly concave positions of the landscape. About 5 percent of this unit includes gently sloping Amenia soils and small areas of well drained soils similar to Grenville soils on more convex positions. Also included in this unit are small areas of Amenia soils with a very stony surface, small areas with a silty clay loam mantle over loamy till, and small areas where limestone bedrock occurs within 60 inches of the surface. In some areas, the surface texture is loam or very fine sandy loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface and subsoil, and slow in the substratum.
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: perched 18 to 36 inches deep at some time from November through May
Root zone: 24 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as cropland or hayland. This soil is considered to be prime farmland.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table may delay planting and harvesting operations after periods of heavy precipitation. Installation of drainage, especially in somewhat poorly drained inclusions, will aid efficiency of farm operations. Conservation tillage systems, crop rotations, and cover crops are good management practices.

This soil is well suited to pasture. The seasonal high water table during early spring can result in muddy barn yards and stunted forage density in some areas of this soil. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major limitations for woodland management in this soil area.

The main limitation if this map unit is used as a site for dwellings is the depth to seasonal high water table. A better suited site on more convex positions can help reduce wetness in basements. Foundation drains and protective coatings on basement walls will also help alleviate wetness. Diversion ditches may help control surface water by carrying it away from the dwelling.

The main limitation if this map unit is used as a site for local roads and streets is frost action. Construction plans should call for providing coarser grained subgrade material. Adequate surface and subsurface drainage in somewhat poorly drained inclusions will also decrease the potential of frost action.

The main limitations if this map unit is used as a site for septic tank absorption fields are the depth to seasonal high water table and slow permeability in the substratum. A better suited site should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this map unit is used as a site for shallow excavations is the depth to seasonal high water table. Digging operations may be restricted during part of the year unless drainage is installed. Sloughing of soil may occur because of wetness during spring.

The capability subclass is 2w.

AtB—Amenia fine sandy loam, 3 to 8 percent slopes

This very deep, gently sloping and moderately well drained soil occurs on undulating glacial till lowlands.

The typical sequence, depth and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, dark brown fine sandy loam

Subsoil:
9 to 16 inches, brown fine sandy loam
23 to 28 inches, dark grayish brown gravelly fine sandy loam with few mottles

Substratum:
28 to 36 inches, dark grayish brown loam with common mottles
36 to 72 inches, grayish brown loam with common mottles

Included with this soil in mapping are about 5 percent somewhat poorly drained Massena soils on flat or slightly concave areas of the landscape. About 5 percent of this unit includes well drained soils similar to Grenville soils on more convex positions, and soil similar to moderately well drained Kalurah soils having a more acid substratum. Also included in this unit are small areas of Amenia soils with a very stony surface, small areas with a silty clay loam mantle over loamy till, and small areas where limestone bedrock occurs within 60 inches of the surface. In some

areas, the surface texture is loam or very fine sandy loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface and subsoil, and slow in the substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: perched 18 to 36 inches deep at some time from November through May
Root zone: 24 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are used as cropland or hay. This soil is considered to be prime farmland.

This soil is well suited to growing cultivated crops and hay. Erosion may reduce soil productivity especially on long slopes. Cultivating along the contour of the landscape will reduce the potential for erosion. Conservation tillage systems, crop rotations, and establishing a cover crop are good management practices.

This soil is well suited to pasture. Erosion can be a management problem on long slopes under heavy grazing by livestock. Overgrazing should be avoided. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major limitations for woodland management on this soil area.

The main limitation if this unit is used as a site for dwellings is the depth to seasonal high water table. A better suited site on higher landscape positions can help reduce wetness in basements. Foundation drains and protective coatings on basement walls will also help alleviate wetness. Diversion ditches may also help control surface water by carrying it away from the dwelling.

The main limitation if this unit is used as a site for local roads and streets is frost action. Construction plans should call for providing coarser grained subgrade material. Adequate surface and subsurface drainage in somewhat poorly drained inclusions will also decrease the potential for frost action.

The main limitations if this unit is used as a site for septic tank absorption fields are the depth to seasonal high water table and slow permeability in the substratum. A better suited site should be considered for this use. If this soil is used, included well drained soils will likely perform better for this use. Conventional septic system designs will likely perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this unit is used as a site for shallow excavations is the depth to seasonal high water table. Digging operations may be restricted during part of the year unless drainage is installed. Sloughing of soil may occur because of wetness during spring.

The capability subclass is 2e.

AwA—Appleton loam, 0 to 3 percent slopes

This very deep, nearly level and somewhat poorly drained soil occurs in swales and on footslopes on glacial till plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 10 inches, dark grayish brown loam

Subsurface layer:
10 to 11 inches, brown fine sandy loam with common mottles

Subsoil:
11 to 18 inches, yellowish brown fine sandy loam with common mottles
18 to 30 inches, dark grayish brown silt loam with many mottles

Substratum:
30 to 72 inches, grayish brown loam with common mottles

Included with this soil in mapping are about 5 percent moderately well drained Bombay soils on slightly more convex positions. About 5 percent of this unit is somewhat poorly drained Northway soils where the subsoil is sandy. Small areas of soils similar to very poorly drained Runeberg soils are included in depressions and near drainageways. Small areas of a soil similar to the somewhat poorly drained Hailesboro and Mino soils are included where rock fragments are absent. In some areas the surface texture is fine sandy loam, sandy loam, or loamy fine sand. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface, and moderately slow or slow in the subsoil and substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: 12 to 18 inches below the surface at some time from November through May
Root zone: generally to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in cropland or hay. A few remaining areas are in pasture or woodland. Only drained areas of this soil are considered prime farmland (fig. 11).

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and sometimes harvest in the fall. Surface and subsurface drainage systems may improve efficiency of farm operations and increase crop yields. Conservation tillage systems, crop rotation, and maintenance of waterways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table can cause significant wetness problems in barnyards and heavily traveled areas of the pasture especially in the spring. Forage growth may be stunted during the early growing season because of wetness. Deferred grazing, rotational grazing, proper stocking rates, maintenance of drainageways, and yearly mowing are good management practices.

The potential productivity for northern red oak on this soil is moderately high. The main limitation is the depth to seasonal high water table. Soft, wet ground conditions may limit use of heavy equipment during spring. Most seedlings do not survive well, and windthrow is more common on wet soil, especially on poorly drained inclusions. Species tolerant to wetness should be encouraged under these conditions and thinning operations minimized.

The main limitation if this soil is used as a site for dwellings is the depth to seasonal high water table. A better suited site should be considered such as a higher area within the map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Roads should be constructed on raised coarse grained fill material and adequate drainage systems installed in critical areas to reduce this limitation.

Figure 11.—Prime farmland in the Town of Peru. This nearly level and undulating area is mainly Appleton and Bombay soils. Only drained areas of Appleton soils qualify as prime farmland.

The main limitations if this soil is used as a site for septic tank absorption fields are the depth to seasonal high water table and its slow permeability. A better suited site should be considered for this use. Higher spots within the map unit would likely perform better for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the depth to seasonal high water table. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil will also likely occur because of wetness.

The capability subclass is 3w.

AwB—Appleton loam, 3 to 8 percent slopes

This very deep, gently sloping, and somewhat poorly drained soil occurs in swales and on footslopes on glacial till plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 10 inches, dark grayish brown loam

Subsurface layer:
10 to 11 inches, brown fine sandy loam with common mottles

Subsoil:
11 to 18 inches, yellowish brown fine sandy loam with common mottles
18 to 30 inches, dark grayish brown silt loam with many mottles

Substratum:
30 to 72 inches, grayish brown loam with common mottles

Included with this soil in mapping are about 5 percent moderately well drained Bombay soils on slightly more convex positions. About 5 percent of this unit is somewhat poorly drained Northway soils where the subsoil is sandy. Small areas of soils similar to very poorly drained Runeberg soils are included in depressions and near drainageways. Small areas of a soil similar to the somewhat poorly drained Hailesboro and Mino soils are included where rock fragments are absent. In some areas the surface texture is fine sandy loam, sandy loam, or loamy fine sand. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface, and moderately slow or slow in the subsoil and substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: 12 to 18 inches below the surface at some time from November through May
Root zone: generally to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in cropland or hay. A few remaining areas are in pasture or woodland. Only drained areas of this soil are considered prime farmland.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and sometimes harvest in the fall. Surface and subsurface drainage systems may improve the efficiency of farm operations and increase crop yields. Conservation tillage systems, crop rotation, and maintenance of waterways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table can cause significant wetness problems in barnyards and heavily traveled areas of the pasture especially in the spring. Forage growth may be stunted during the early growing season because of wetness. Deferred grazing, rotational grazing, proper stocking rates, maintenance of drainageways, and yearly mowing are good management practices.

The potential productivity for northern red oak on this soil is moderately high. The main limitation is the depth to seasonal high water table. Soft, wet ground conditions may limit use of heavy equipment during spring. Most seedlings do not survive well, and windthrow is more common on wet soil, especially on poorly drained inclusions. Species tolerant to wetness should be encouraged under these conditions and thinning operations minimized.

The main limitation if this soil is used as a site for dwellings is the depth to seasonal high water table. A better suited site should be considered such as a higher area within the map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Roads should be constructed on raised coarse grained fill material and adequate drainage systems installed in critical areas to reduce this limitation.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and its slow permeability. A better suited site should be

considered for this use. Higher spots within the map unit would likely perform better for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the depth to seasonal high water table. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil will also likely occur because of wetness.

The capability subclass is 3w.

BcB—Becket fine sandy loam, 3 to 8 percent slopes

This very deep and well drained soil occurs on gently sloping, convex areas of glacial till uplands.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
1 inch thick layer of roots and leaves
0 to 3 inches, very dark gray fine sandy loam

Subsurface layer:
3 to 4 inches, grayish brown fine sandy loam

Subsoil:
4 to 9 inches, dark reddish brown sandy loam
9 to 16 inches, reddish brown sandy loam
16 to 23 inches, dark yellowish brown sandy loam

Substratum:
23 to 33 inches, firm, dark yellowish brown gravelly fine sandy loam
33 to 72 inches, firm, dark yellowish brown cobbly fine sandy loam

Included with this soil in mapping are about 10 percent moderately well drained Skerry soils on foot slopes and in slightly concave areas. About 5 percent of this unit consists of well drained Monadnock soils intermixed throughout the unit where the substratum is less dense. Also in this unit are small areas of somewhat poorly drained Adirondack soils along drainageways and in concave areas. There are small inclusions of Becket soils having more strongly sloping areas. Becket soils with a very stony or bouldery surface are included in wooded spots and unimproved pastures. In some areas, the surface texture is sandy loam or loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: perched 24 to 42 inches deep at some time during March and April
Root zone: up to 30 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in hay or pasture. Some areas are reverting to brush or woodland. This soil qualifies as prime farmland in Clinton County.

This soil is well suited to growing cultivated crops and hay. Erosion can be a management problem on long slopes planted to row crops. Crop productivity generally decreases with loss of valuable topsoil. Cultivating along the contour of the landscape will help minimize soil erosion. Conservation tillage systems, crop rotation, stripcropping, and the use of cover crops are good management practices.

This soil is well suited to pasture. Erosion may become a management problem on long, heavily grazed slopes. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major limitations for woodland management for this soil. Windthrow can be a problem in areas of Adirondack soil inclusions because of the limited rooting depth.

The main limitation if this soil is used as a site for dwellings with basements is the brief perched seasonal high water table. Foundation drains and protective coatings on basement walls will help alleviate some seepage. Diversion ditches can also control surface water by carrying it away from the dwelling.

Moderate limitations if this soil is used as a site for local roads and streets are the brief seasonal high water table and frost action. Providing coarser grained subgrade material is one way of alleviating frost action. Adequate surface or subsurface drainage in critical areas will also decrease the potential for frost action.

The main limitation if this soil is used as a site for septic tank absorption fields is slow permeability in the substratum. Also, Becket soils have a brief seasonal high water table in the spring. Nearby soils or inclusions of Monadnock soils may be better suited for this use. An alternate system can be designed for this soil to prolong system use and to avoid seepage into water supplies.

The main limitations if this soil is used as a site for shallow excavations are the brief seasonal high water table over its dense substratum. Digging operations after heavy rainfall or rapid snowmelt may be delayed unless drainage is enhanced. Digging can be very difficult in the substratum particularly during dry periods.

The capability subclass is 2e.

BcC—Becket fine sandy loam, 8 to 15 percent slopes

This very deep, strongly sloping, and well drained soil occurs on convex areas of glacial till uplands.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
1 inch thick layer of roots and leaves
0 to 3 inches, very dark gray fine sandy loam

Subsurface layer:
3 to 4 inches, grayish brown fine sandy loam

Subsoil:
4 to 9 inches, dark reddish brown sandy loam
9 to 16 inches, reddish brown sandy loam
16 to 23 inches, dark yellowish brown sandy loam

Substratum:
23 to 33 inches, firm, dark yellowish brown gravelly fine sandy loam
33 to 72 inches, firm, dark yellowish brown cobbly fine sandy loam

Included with this soil in mapping are about 10 percent moderately well drained Skerry soils on slightly concave areas and on foot slopes. About 5 percent of this unit

is well drained Monadnock soils where the substratum is less dense. Small areas of somewhat poorly drained Adirondack soils occur near drainageways and seep areas. Also steeper and lesser sloping areas of Becket soils as well as small areas of bouldery Becket soils are included in this unit. In some areas, the surface texture is sandy loam or loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: perched 24 to 42 inches deep at some time during March and April
Root zone: up to 30 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland. Some areas are used as hay or pasture.

This soil is moderately well suited to growing cultivated crops and hay. Erosion is commonly a management problem on long slopes planted to row crops. Future crop productivity may be reduced by loss of valuable topsoil. Cultivating along the contour of the landscape will help minimize soil erosion. Conservation tillage systems, crop rotation, stripcropping, and the use of cover crops are good management practices.

This soil is moderately well suited to pasture. Erosion can be a significant management problem on heavily grazed areas of this soil. Overgrazing should be avoided to reduce soil erosion and encourage key plant species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major limitations for woodland management on this soil. Windthrow can be a problem, however, in seepage areas because of more limited rooting depth.

The main limitation if this soil is used as a site for dwellings with basements is the brief, perched seasonal high water table. Foundation drains and protective coatings on basement walls will help alleviate some seepage. Diversion ditches can also control surface water by carrying it away from the dwelling.

Moderate limitations if this soil is used as a site for local roads and streets are the brief seasonal high water table, slope, and frost action. Design of new roads can be adapted to the strongly sloping terrain, such as routing the road along the contour to minimize costs. However, the cost of grading and landscaping will be high for this map unit compared to lesser sloping units. Construction designs can specify providing coarser grained subgrade material to minimize frost heave. Adequate surface and subsurface drainage in critical areas will also decrease the potential for frost action.

The main limitation if this soil is used as a site for septic tank absorption fields is the slow permeability in the substratum. Also, Becket soils have a brief seasonal high water table in the spring. A better suited site such as on Monadnock soil inclusions will perform better for this use. An alternate system can be designed to prolong system use and to avoid seepage into water supplies.

The main limitation if this soil is used as a site for shallow excavations is the brief seasonal high water table over its dense substratum. Digging operations after heavy rainfall or rapid snowmelt may be delayed unless drainage is enhanced. Digging can be very difficult in the substratum particularly during dry periods.

The capability subclass is 3e.

BeC—Becket fine sandy loam, strongly sloping, very bouldery

This very deep and well drained soil occurs on convex, glacial till uplands and side slopes. Large stones cover up to 3 percent of the soil surface. Slopes range from 3 to 15 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
1 inch thick layer of roots and leaves
0 to 3 inches, very dark gray fine sandy loam

Subsurface layer:
3 to 4 inches, grayish brown fine sandy loam

Subsoil:
4 to 9 inches, dark reddish brown sandy loam
9 to 16 inches, reddish brown sandy loaves
16 to 23 inches, dark yellowish brown sandy loam

Substratum:
23 to 33 inches, firm, dark yellowish brown gravelly fine sandy loam
33 to 72 inches, firm, dark yellowish brown cobbly fine sandy loam

Included with this soil in mapping are about 10 percent moderately well drained Skerry soils on slightly concave areas and on foot slopes. About 5 percent of this unit is well drained Monadnock soils where the substratum is less dense. Small areas of somewhat poorly drained Adirondack soils occur near drainageways and seep areas. Also steeper and lesser sloping areas of Becket soils as well as small areas of non-bouldery Becket soils are included in this unit. In some areas, the surface texture is sandy loam or loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: perched 24 to 42 inches deep at some time during March and April
Root zone: up to 30 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland and pasture.

This soil is poorly suited to growing cultivated crops and hay. Large surface stones or boulders inhibit efficient use of farm machinery and also cause serious wear and tear on equipment. Stone clearing will be necessary to accommodate farm machinery use.

This soil is poorly suited to pasture. Large boulders or stones covering the surface inhibit mowing and other maintenance. Erosion can be a significant management problem on heavily grazed areas of this soil. Overgrazing should be avoided to reduce soil erosion and encourage key plant species. Stone removal, rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major limitations for woodland management for this soil. Windthrow can be a problem, however, in seepage areas because of the limited rooting depth.

The main limitation if this soil is used as a site for dwellings with basements is the brief, perched seasonal high water table. Foundation drains and protective coatings on basement walls will help alleviate seepage. Diversion ditches can also control surface water by carrying it away from the dwelling.

Moderate limitations if this soil is used as a site for local roads and streets are frost action, the brief seasonal high water table, and strongly sloping areas. Constructing roads along the contour will minimize the slope limitation. However, the costs of grading and landscaping on these areas will be high compared to gently sloping areas. Providing a coarse-grained subgrade will reduce frost action. Adequate surface and subsurface drainage in seep areas will also decrease the potential for frost action.

The main limitation if this soil is used as a site for septic tank absorption fields is the slow permeability. Also, Becket soils have a brief seasonal high water table in the spring. A better suited site such as a Monadnock soil inclusion will perform more efficiently for this use. An alternate system can be designed to prolong system use and to avoid seepage into water supplies.

The main limitation if this soil is used as a site for shallow excavations is the brief seasonal high water table over the dense substratum. Digging operations after heavy rainfall or rapid snowmelt may be delayed unless drainage is enhanced. Digging can be very difficult in the substratum particularly during dry periods.

The capability subclass is 6s.

BeD—Becket fine sandy loam, moderately steep, very bouldery

This very deep and well drained soil is on hillsides in glaciated uplands. Large stones cover up to 3 percent of the surface of this unit. Slopes range from 15 to 35 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
1 inch thick layer of roots and leaves
0 to 3 inches, very dark gray fine sandy loam

Subsurface layer:
3 to 4 inches, grayish brown fine sandy loam

Subsoil:
4 to 9 inches, dark reddish brown sandy loam
9 to 16 inches, reddish brown sandy loam
16 to 23 inches, dark yellowish brown sandy loam

Substratum:
23 to 33 inches, firm, dark yellowish brown gravelly fine sandy loam
33 to 72 inches, firm, dark yellowish brown cobbly fine sandy loam

Included with this soil in mapping are about 5 percent moderately well drained Skerry soils on foot slopes and in slightly concave areas. About 5 percent of this unit consists of well drained Monadnock soils intermixed throughout the unit where the substratum is less dense. Moderately deep Tunbridge soils make up about 5 percent of this unit. Tunbridge soils are on higher slopes where bedrock is 20 to 40 inches deep. Also in this unit are small areas of somewhat poorly drained Adirondack soils along drainageways and in concave areas. Inclusions of non-bouldery Becket soils are in small areas where the soil has been cleared. In some areas, the surface texture is cobbly fine sandy loam or extremely bouldery fine sandy loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: perched 24 to 42 inches deep at some time during March and April
Root zone: up to 30 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland.

This soil is poorly suited to growing cultivated crops and hay. Large surface stones inhibit efficient use of farm machinery and also cause serious wear and tear on equipment. Stone clearing will be necessary to accommodate for farm machinery in most areas of this unit. If this soil were cultivated, erosion would be a serious management concern on this moderately steep map unit.

This soil is poorly suited to pasture. Large boulders or stones covering the surface inhibit yearly mowing and other maintenance practices. Erosion can be a significant management problem on heavily grazed areas of this soil. Maintaining plant cover is essential for preventing significant loss of topsoil. Avoiding excessive grazing will reduce soil erosion and encourage key plant species. Stone removal, rotational grazing, proper stocking rates and controlling weed competition are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. Erosion can be a management problem where vegetation is removed. Minimal clear-cutting and placing logging roads along the contour will help prevent excessive soil erosion. The steep slopes of this unit can limit maneuverability and safe use of harvest equipment.

The main limitations if this soil is used as a site for dwellings are brief periods of wetness, and the moderately steep and steep slopes. Building sites will require some grading and landscaping expenses. Designing structures to conform to the natural terrain will help compensate for the slope limitation. Foundation drains and sealing basement walls will help alleviate seepage. Inclusions or nearby areas with less slope may be better suited for this use.

The main limitation if this soil is used as a site for local roads and streets is the moderately steep and steep slopes. Adapting road design to the terrain by constructing along the contour can help to overcome this limitation. Landscaping and grading costs will be high on areas of this soil compared to less sloping inclusions or nearby soils.

The main limitations if this soil is used as a site for septic tank absorption fields are slope and the slow permeability in the substratum. Also, Becket soils have a brief seasonal high water table in the spring. A better suited site should be considered for this use. Installation of the system on better suited inclusions or nearby soils such as Monadnock soils will reduce costs and increase operating efficiency.

The main limitations if this soil is used as a site for shallow excavations are the moderately steep and steep slopes and brief periods of wetness. Maneuvering digging equipment will be difficult and may be risky at times.

The capability subclass is 7s.

BgC—Becket-Tunbridge complex, strongly sloping, very rocky

This unit consists of well drained soils on the tops and sides of hills and ridges in glaciated uplands. The very deep Becket soils are generally on the middle and lower

slopes. The moderately deep Tunbridge soils are generally on higher areas of the landscape and on slope crests, often near bedrock outcrops and ledges. Exposed bedrock covers 2 to 10 percent of the surface of this unit. This unit consists of about 50 percent Becket soils, 30 percent Tunbridge soils, and 20 percent other soils. The Becket and Tunbridge soils are so intermingled that it was not practical to map them separately. Slopes range from 3 to 15 percent.

The typical sequence, depth, and composition of the layers of the Becket soil are as follows—

Surface layer:
1 inch thick layer of roots and leaves
0 to 3 inches, very dark gray fine sandy loam

Subsurface layer:
3 to 4 inches, grayish brown fine sandy loam

Subsoil:
4 to 9 inches, dark reddish brown sandy loam
9 to 16 inches, reddish brown sandy loam
16 to 23 inches, dark yellowish brown sandy loam

Substratum:
23 to 33 inches, firm, dark yellowish brown gravelly fine sandy loam
33 to 72 inches, firm, dark yellowish brown cobbly fine sandy loam

The typical sequence, depth, and composition of the layers of the Tunbridge soil are as follows—

Surface layer:
0 to 1 inch, very dark brown fine sandy loam
1 to 4 inches, reddish brown fine sandy loam

Subsoil:
4 to 9 inches, reddish brown gravelly loam
9 to 16 inches, yellowish red loam
16 to 26 inches, brown gravelly fine sandy loam
26 inches, unweathered crystalline bedrock

Included with these soils in mapping are about 5 percent moderately well drained Skerry soils on footslopes and along drainageways. Shallow Lyman soils are included on ridge crests and adjacent to rock outcrops making up about 5 percent of the unit. About 3 percent of this unit consists of well drained Monadnock soils in areas where the soil is very deep but lacks a dense substratum. Also included in this unit are small areas where bedrock is 40 to 60 inches deep. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties of the Becket soils—

Permeability: moderate in the surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: perched 24 to 42 inches deep at some time during March and April
Root zone: up to 30 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Tunbridge soils—

Permeability: moderate or moderately rapid throughout
Available water capacity (average for 40-inch profile): moderate

Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally to the depth of bedrock
Shrink swell potential: low
Depth to bedrock: 20 to 40 inches

Most areas of this soil are in woodland or brush.

This unit is poorly suited to cultivated crops and hay. The rock outcrops and large stones on the surface limit cultivation and other equipment use. Erosion of topsoil is a management concern where vegetation is removed or the soil is otherwise disturbed. Slopes on this unit are sometimes rolling by nature which limits application of some conservation practices.

This unit is poorly suited to pasture. The rock outcrops and large surface stones in most areas of this map unit make the proper management of forage difficult. Erosion is a concern on the heavily traveled areas of these soils. Avoiding excessive grazing will help prevent significant erosion. Key pasture species will also suffer from weed competition if grazing is left unchecked. Rotational grazing, proper stocking rates, and yearly mowing are good management practices.

The potential productivity for growing sugar maple on this soil is moderate. Because of moderate depth to bedrock in Tunbridge soils, there is some risk of windthrow on this unit, particularly adjacent to clear-cut areas. Selecting species with moderate rooting depths will help to overcome this limitation.

The main limitations if this map unit is used as a site for dwellings are the moderate depth to bedrock in Tunbridge soils and the brief seasonal high water table in Becket soils. Building sites will require some grading and landscaping expenses. However, shaping of the land may be limited in bedrock-controlled areas. Designing structures to conform to the natural terrain will help compensate for the slope limitation and depth to rock. Sealing foundations and foundation drains will help alleviate seepage.

Moderate limitations if this unit is used as a site for local roads and streets are frost action, slope, brief periods of wetness in areas of Becket soils, and the depth to rock in Tunbridge soils. Providing a coarse-grained subgrade will reduce frost action. Constructing roads along the contour will reduce the slope limitation. Grading and landscaping will be more difficult on areas of the moderately deep Tunbridge soil. Planning road and street routes to avoid areas of Tunbridge soil and steeper inclusions of this unit will help minimize construction costs.

The main limitations if this unit is used as a site for septic tank absorption fields are slow permeability in Becket soils and moderate depth to rock in areas of Tunbridge soils. Also, areas of Becket soils have a brief seasonal high water table in the spring. A better suited site should be considered for this use. Installation of septic systems on inclusions such as Monadnock soils may reduce costs and increase operating efficiency. The cost of land shaping will be higher on this unit than on areas which are consistently very deep to bedrock. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitations if this unit is used as a site for shallow excavations are brief periods of wetness in areas of Becket soils, and the depth to bedrock in Tunbridge soils. Excavations in areas of Tunbridge soils may require blasting. Areas of Becket soils in this unit are better suited for excavations, although the dense substrata may be difficult to dig during dry periods.

The capability subclass is 6s.

BgE—Becket-Tunbridge complex, steep, very rocky

This unit consists of well drained soils on the sides of hills and ridges in glaciated uplands. The very deep Becket soils are generally on the middle and lower slopes of this unit. Moderately deep Tunbridge soils are generally on upper slopes and other

convex areas, often near bedrock outcrops and ledges. Exposed bedrock covers 2 to 10 percent of the surface of the unit. This unit consists of about 50 percent Becket soils, 30 percent Tunbridge soils, and 20 percent other soils. The Becket and Tunbridge soils are so intermingled that it was not practical to map them separately. Slopes range from 15 to 35 percent.

The typical sequence, depth, and composition of the layers of the Becket soil are as follows—

Surface layer:
1 inch thick layer of roots and leaves
0 to 3 inches, very dark gray fine sandy loam

Subsurface layer:
3 to 4 inches, grayish brown fine sandy loam

Subsoil:
4 to 9 inches, dark reddish brown sandy loam
9 to 16 inches, reddish brown sandy loam
16 to 23 inches, dark yellowish brown sandy loam

Substratum:
23 to 33 inches, firm, dark yellowish brown gravelly fine sandy loam
33 to 72 inches, firm, dark yellowish brown cobbly fine sandy loam

The typical sequence, depth, and composition of the layers of the Tunbridge soil are as follows—

Surface layer:
0 to 1 inch, very dark brown fine sandy loam
1 to 4 inches, reddish brown fine sandy loam

Subsoil:
4 to 9 inches, reddish brown gravelly loam
9 to 16 inches, yellowish red loam
16 to 26 inches, brown gravelly fine sandy loam
26 inches, unweathered crystalline bedrock

Included with unit in mapping are about 5 percent moderately well drained Skerry soils on footslopes and along drainageways. Shallow Lyman soils are included on ridge crests and adjacent to rock outcrops making up about 5 percent of the unit. About 3 percent of this unit consists of well drained Monadnock soils where it is very deep but lacks a dense substratum. Also included in this unit are small areas of well drained soil where bedrock is 40 to 60 inches deep, and small areas that are less sloping or greater than 35 percent. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties of the Becket soils—

Permeability: moderate in the surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: perched 24 to 42 inches deep at some time during March and April
Root zone: up to 30 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Tunbridge soils—

Permeability: moderate or moderately rapid throughout
Available water capacity (average for 40-inch profile): moderate

Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally to the depth of bedrock
Shrink swell potential: low
Depth to bedrock: 20 to 40 inches

Most areas of this soil are in woodland.

This unit is poorly suited to cultivated crops and hay. The steep slopes and rock outcrops severely restrict cultivation and other equipment use. Erosion of topsoil is a major management concern especially where vegetation is removed.

This unit is poorly suited to pasture. The steep slopes, rock outcrops and large surface stones in most areas of this map unit make proper management of forage plants difficult. Erosion is a serious concern on the heavily traveled areas of these soils. Avoiding excessive grazing will help prevent significant erosion and decrease weed competition. Rotational grazing, proper stocking rates, and controlling weed competition are good management practices.

The potential productivity for growing sugar maple on this soil is moderate. Erosion can be a problem where vegetation is removed. Minimizing clear-cutting and placing logging roads along the contour will help prevent excessive soil erosion. The moderately steep and steep slopes of this unit limit maneuverability and safe use of equipment. Because of the moderate depth to bedrock in Tunbridge soils, there is some risk of windthrow on this unit particularly adjacent to clear-cut areas. Selecting species with moderate rooting depths will help to overcome this limitation.

The main limitations if this unit is used as a site for dwellings are slope, brief periods of wetness in areas of Becket soils, and the moderate depth to bedrock in Tunbridge soils. Building sites will require some grading and landscaping expenses. However, shaping the land may be limited in bedrock-controlled areas. Designing structures to conform to the natural terrain will help compensate for slope limitation and depth to rock. Inclusions or nearby soils with less slope may be better suited to this use.

The main limitation if this unit is used as a site for local roads and streets is the moderately steep or steep slope. Constructing roads along the contour can help to overcome the slope limitation. Costs of grading and landscaping on areas of this unit will be high compared to less sloping inclusions or nearby soils.

The main limitations if this unit is used as a site for septic tank absorption fields are slope, slow permeability in the substratum of Becket soils, and the moderate depth to rock in areas of Tunbridge soils. A better suited site should be considered for this use. Installation of the system on better suited soils such as Monadnock soils will reduce costs and increase operating efficiency. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitations if this unit is used as a site for shallow excavations are brief periods of wetness in areas of Becket soils, the steep slopes, and the depth to bedrock in Tunbridge soils. Maneuvering equipment for digging will be difficult and risky at times. Excavations in areas of Tunbridge soils may require blasting. Selecting areas with deeper, less sloping soils will reduce costs and facilitate excavations.

The capability subclass is 7s

BhC—Benson loam, strongly sloping, very rocky

This shallow and somewhat excessively drained soil occurs on convex, bedrock-controlled areas on glacial till lowlands. Exposed bedrock covers 2 to 10 percent of the surface of this unit. Slopes range from 3 to 15 percent, but are dominantly 8 to 15 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 6 inches, dark brown loam

Subsoil:
6 to 11 inches, brown channery silty clay loam
11 to 14 inches, mixed dark yellowish brown and brown very channery silty clay loam

Substratum:
14 to 18 inches, brown extremely channery silty clay loam
18 inches, dark gray calcareous shale bedrock

Included with this unit in mapping are about 5 percent Gardenisle soils and other moderately deep soils in areas between bedrock ledges. About 5 percent of this unit is Kingsbury soils and soils similar to Heuvelton soils where clayey deposits occur. Also included are soils similar to Benson, but having less rock fragments throughout. Some areas of this unit have a higher percentage of bedrock exposure and very shallow soil inclusions. There are also some small areas having sandy deposits overlying bedrock. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface and subsoil, and moderately slow in the substratum
Available water capacity (average for 40-inch profile): very low to low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock depth
Shrink-swell potential: low
Depth to bedrock: 10 to 20 inches

Most areas of this unit are in woodland or brush.

This unit is poorly suited to cultivated crops and hay. Rock outcrops and shallow depth to bedrock can make management of this unit difficult causing excessive wear on machinery. Because of the low available water capacity, this soil is droughty during most summers. Erosion can be a serious problem, especially on strongly sloping areas, and may result in significant loss of topsoil. Maintaining vegetative cover on this unit will help to reduce erosion. Because of the loamy surface and shallow depth, the potential for pesticide and nutrient loss from runoff on this soil is high.

This unit is poorly suited to pasture. Rock outcrops may interfere with equipment use, which limits pasture improvements and management. The low available water capacity in this soil may cause poor forage conditions during droughty periods. Erosion is a serious management concern on heavily traveled, strongly sloping areas of this soil. Avoiding excessive grazing will help prevent significant erosion. Key pasture species may succumb to weed competition if grazing is left unchecked. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this unit is moderate. Seedling mortality tends to be severe because of the very low or low available water capacity. Selecting varieties which are tolerant of dry soil conditions and planting while the soil is moist, are ways to improve seedling survival. Due to shallow soil conditions, there is a severe risk of windthrow on this unit. Planting trees that are tolerant of shallow rooting depth and minimizing clear cutting practices will reduce potential windthrow.

The main limitation if this unit is used as a site for dwellings is the depth to bedrock. Inclusions or adjacent units of deeper soils may be better suited. Dwellings

with basements in most areas of this unit will have to be built on bedrock and landscaped with additional fill.

The main limitation if this unit is used as a site for local roads and streets is the depth to bedrock. Some blasting may be necessary to allow for proper grading and smoothing. Routing new roads around these bedrock-controlled landforms may help reduce construction costs.

The main limitation if this unit is used as a site for septic tank absorption fields is depth to bedrock. This soil may inherently allow seepage of sewage effluent into nearby water supplies. A better suited site, such as very deep inclusions or nearby deeper soil units may be better suited for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this unit is used as a site for shallow excavations is the depth to bedrock. Digging may be difficult especially in dominantly limestone bedrock areas. Selecting deeper nearby soils in which to install utilities will facilitate excavation.

The capability subclass is 6s.

BhE—Benson loam, steep, very rocky

This shallow, steep and very steep, and somewhat excessively drained soil occurs on side slopes of bedrock controlled areas on glacial till lowlands. Exposed bedrock covers 2 to 10 percent of the surface of this unit. Slopes range from 25 to 45 percent, but are dominantly 25 to 35 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 6 inches, dark brown loam

Subsoil:
6 to 11 inches, brown channery silty clay loam
11 to 14 inches, mixed dark yellowish brown and brown very channery silty clay loam

Substratum:
14 to 18 inches, brown extremely channery silty clay loam
18 inches, dark gray calcareous shale bedrock

Included with this unit in mapping are about 5 percent Gardenisle soils and other moderately deep soils at backslope and footslope positions. About 2 percent of this unit includes soils similar to Heuvelton soils where clayey deposits occur. Also included are soils similar to Benson, but having less rock fragments throughout. Some areas of this unit have a higher percentage of bedrock exposure and very shallow soil inclusions. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface and subsoil, and moderately slow in the substratum
Available water capacity (average for 40-inch profile): very low to low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock depth
Shrink-swell potential: low
Depth to bedrock: 10 to 20 inches

Most areas of this unit are in woodland or brush.

This unit is poorly suited to cultivated crops and hay. Rock outcrops, shallow depth to bedrock and steep slopes make management of this unit very difficult or

impossible. Because of the loamy surface and shallow depth, the potential for pesticide and nutrient loss from runoff on this soil is high.

This unit is poorly suited to pasture. Rock outcrops and steep slopes deter maintenance equipment use for pasture improvements and management. The limited rooting depth and low available water capacity in this soil may cause poor forage conditions during droughty periods. Erosion is a serious management concern on heavily traveled areas of this soil. Avoiding excessive grazing will help prevent significant erosion.

The potential productivity for growing sugar maple on this unit is moderate. Seedling mortality tends to be severe because of the very low or low available water capacity. Selecting varieties which are tolerant of dry soil conditions and planting while the soil is moist are ways to improve seedling survival. Due to shallow soil conditions, there is a severe risk of windthrow on this unit. Planting trees that are tolerant of shallow rooting depth and minimizing clear cutting practices will reduce potential windthrow. Because of steep slopes, equipment use is limited on this soil, depending on the machine's maneuverability.

The main limitations if this unit is used as a site for dwellings are the depth to bedrock and steep slopes. Adjacent units of less sloping, deeper soils will likely be better suited for this use. Dwellings with basements will need to be landscaped with additional fill in most areas of this unit. Building design should conform to the contour of the landscape in order to minimize construction and landscaping costs.

The main limitations if this unit is used as a site for local roads and streets are the depth to bedrock and steep slopes. Less sloping areas are better suited for this use. Some blasting will probably be necessary to allow for proper grading and smoothing if this unit is used as a site for local roads and streets. Routing new roads around these bedrock-controlled landforms will help reduce construction costs.

The main limitations if this unit is used as a site for septic tank absorption fields are depth to bedrock and steep slopes. A better suited site should be considered for this use. This soil may allow seepage of septic effluent into water supplies if conventional systems are used.

The main limitations if this unit is used as a site for shallow excavations are the depth to bedrock and steep slopes. Digging may be difficult especially in dominantly limestone bedrock areas. Maneuverability of digging machines will be more limited on this soil than less steep areas. Selecting less sloping, deeper landscapes to route utilities will facilitate excavation.

The capability subclass is 7s.

Bo—Beseman mucky peat

This soil is very deep, nearly level, and very poorly drained. It formed in organic deposits that are 16 to 51 inches thick over loamy deposits in basin-like areas on glacial till plains and outwash plains. Slopes range up to 1 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, dark yellowish brown peat
2 to 10 inches, dark yellowish brown mucky peat

Subsurface layer:
10 to 35 inches, dark reddish brown muck

Bottom layer:
35 to 45 inches, black muck

Substratum:
45 to 72 inches, gray fine sandy loam

Included with this soil in mapping are about 10 percent very poorly drained Loxley soils having thicker organic deposits. About 5 percent of this unit consists of very poorly drained Sabattis and Searsport soils formed in dominantly mineral deposits at the fringe of this unit. Small areas of very poorly drained Medomak soils are included along floodplains. Also included are small areas of Saprists and Aquents (fresh water marsh), which are typically ponded year round. Small areas of somewhat excessively drained Adams soils and moderately well drained Croghan soils are on knolls in some units. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate or moderately rapid in the surface and subsurface tiers, and moderately slow in the substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: ranges from 24 inches above the soil surface to 12 inches below the surface from November to July
Root zone: mainly to 12 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland or brush.

This soil is not suited to growing cultivated crops and hay because of the seasonal high water table. The surface is ponded during much of the growing season.

This soil is not suited to pasture. The seasonal high water table is near the surface or ponds much of the year. The productivity of this soil for typical pasture plants is very low. Ground conditions are generally too soft to support livestock traffic.

The potential productivity for growing balsam fir on this soil is moderately high. However the organic material has low bearing strength for supporting heavy timber harvesting equipment. Because of the high water table, seedling mortality is severe except for water tolerant species. Because of the shallow rooting depth in this soil, there is a potential for windthrow. The selection of shallow rooted species and minimizing clear-cutting practices will help prevent excessive windthrow.

The main limitations if this soil is used as a site for dwellings are the seasonal high water table and low bearing strength. The organic material will not support dwellings or conventional construction equipment without special precautions to increase stability of loads. Better suited soils should be considered for dwelling sites. Because of its low position on the landscape, this soil is difficult to drain without destroying important wetland habitat.

The main limitations if this soil is used as a site for local roads and streets are the seasonal high water table and potential frost action. Constructing roads on raised coarse grained fill material and providing adequate drainage will help alleviate problems due to wetness and frost action. Excavation of organic deposits and substantial additions of fill material will likely be required to provide a stable road bed.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the moderately slow permeability in the substratum. A better suited site should be considered for this use. The prolonged ponding and the seasonal high water table create a severe risk of ground water pollution or effluent seepage to the surface if this soil is used for septic fields.

The main limitations if this soil is used as a site for shallow excavations are the depth to seasonal high water table, excess humus, and the tendency of cutbanks to cave. Digging operations may be restricted to the driest periods of the year unless drainage is installed. Cutbanks in this soil tend to cave in because of wetness and the high organic matter content. Mechanical support of excavation walls should be considered to protect workers.

The capability subclass is 7w.

BrB—Bice fine sandy loam, 3 to 8 percent slopes

This very deep, gently sloping and well drained soil occurs on convex areas of glacial till uplands.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 11 inches, dark brown fine sandy loam

Subsoil:
11 to 16 inches, strong brown fine sandy loam
16 to 26 inches, yellowish brown gravelly fine sandy loam

Substratum:
26 to 43 inches, yellowish brown gravelly fine sandy loam
43 to 72 inches, brown gravelly fine sandy loam

Included with this soil in mapping are about 10 percent moderately well drained Schroon soils on less convex areas, eroded places, and footslopes. About 5 percent of this unit is well drained Monadnock and moderately well drained Sunapee soils having more reddish brown subsoil. In some areas, there are inclusions of very gravelly deposits similar to Colosse and Hermon soils. Small areas of somewhat poorly drained Peasleeville and Adirondack soils occur near drainageways and slightly concave positions. Small areas of Adams and Occur soils are included near sandy beach ridge deposits. Some areas have significant inclusions of Becket and Skerry soils with dense substrata. Also included are small areas of Bice soils with a very stony surface. In some areas, the surface texture was observed to very fine sandy loam or loam. Included areas make up about 25 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate or moderately rapid throughout
Available water capacity (average for 40-inch profile): moderate to high
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in corn, hay and pasture. This soil qualifies as prime farmland in Clinton County.

This soil is well suited to growing cultivated crops and hay. Erosion of topsoil may significantly reduce soil productivity on long slopes of this unit. When cultivating, work should progress along the contour of the landscape where possible. Conservation tillage systems, crop rotation, stripcropping and the use of cover crops are good management practices.

This soil is well suited to pasture. Erosion can be a management problem particularly on long slopes subject to heavy grazing. Overgrazing should be avoided. Rotational grazing, proper stocking rates and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is high. There are no major woodland management limitations on this soil.

There are no major limitations on this soil for dwellings with or without basements.

There are no major limitations on this soil for local roads and streets.

Permeability is a moderate limitation if this soil is used as a site for septic tank absorption fields. Larger absorption fields may be needed on this soil to prolong the life of the system and increase efficiency.

There are no major limitations on this soil for shallow excavations.

The capability subclass is 2e.

BrC—Bice fine sandy loam, 8 to 15 percent slopes

This very deep, strongly sloping and well drained soil occurs on convex side slopes of glacial till uplands.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 11 inches, dark brown fine sandy loam

Subsoil:
11 to 16 inches, strong brown fine sandy loam
16 to 26 inches, yellowish brown gravelly fine sandy loam

Substratum:
26 to 43 inches, yellowish brown gravelly fine sandy loam
43 to 72 inches, brown gravelly fine sandy loam

Included with this soil in mapping are about 5 percent moderately well drained Schroon soils on gently sloping areas, undulating slopes and on footslope positions of the landscape. About 5 percent of this unit are well drained Monadnock and moderately well drained Sunapee soils having a more reddish brown subsoil. In some areas, there are inclusions of very gravelly deposits similar to Colosse and Hermon soils. Small areas of somewhat poorly drained Peasleeville and Adirondack soils occur near drainageways and slightly concave positions. Some areas have inclusions of Becket and Skerry soils having dense substrata. Also included are small areas of Bice soils with a very stony surface. In some areas, the surface texture was observed to very fine sandy loam or loam. Included areas make up about 20 percent of this unit and range up to 5 acres.

Soil Properties—

Permeability: moderate or moderately rapid throughout
Available water capacity (average for 40-inch profile): moderate to high
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in hay, corn and pasture.

This soil is moderately well suited to growing cultivated crops and hay. Erosion is commonly a problem on long slopes and areas planted to row crops. Future crop productivity may be reduced by subsequent loss of valuable topsoil. Care should be taken when cultivating by working along the contour of the landscape. Conservation tillage systems, crop rotation, stripcropping and the use of cover crops are good management practices.

This soil is moderately well suited to pasture. Erosion can be a significant management problem on heavily grazed areas of this soil. Overgrazing should be avoided in order to reduce soil erosion and encourage key plant species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is high. There are no major woodland management limitations on this soil.

A moderate limitation if this soil is used as a site for dwellings is slope. This strongly sloping map unit will require more grading and landscaping than the gently sloping areas. To help control costs, design of the dwelling should conform to the natural slope.

The strongly sloping topography is a moderate limitation if this soil is used as a site for local roads and streets. Constructing roads along the contour will help minimize the slope limitation.

Permeability and the strongly sloping topography are moderate limitations if this soil is used as a site for septic tank absorption fields. Larger absorption fields may be needed on this soil to prolong the life of the system and increase its efficiency. Installation of the absorption fields on lesser sloping inclusions will help reduce costs. Absorption field lines should be installed along the contour of the slope, where possible.

The strongly sloping landscape is a moderate limitation if this soil is used as a site for shallow excavations. Maneuvering equipment on this map unit may be difficult in places.

The capability subclass is 3e.

BsC—Bice fine sandy loam, strongly sloping, very stony

This soil is very deep and well drained on convex side slopes, and rolling or undulating areas of glacial till uplands. Large stones cover up to 3 percent of the soil surface. Slope ranges from 3 to 15 percent.

The typical sequence, depth and composition of the layers of this soil are as follows—

Surface layer:
0 to 11 inches, dark brown fine sandy loam

Subsoil:
11 to 16 inches, strong brown fine sandy loam
16 to 26 inches, yellowish brown gravelly fine sandy loam

Substratum:
26 to 43 inches, yellowish brown gravelly fine sandy loam
43 to 72 inches, brown gravelly fine sandy loam

Included with this soil in mapping are about 5 percent moderately well drained Schroon soils on gently sloping areas, undulating slopes and on footslope positions of the landscape. About 5 percent of this unit are well drained Monadnock and moderately well drained Sunapee soils having a more reddish brown subsoil. In some areas, there are inclusions of very gravelly deposits similar to Colosse and Hermon soils. Small areas of somewhat poorly drained Peasleeville and Adirondack soils occur near drainageways and slightly concave positions. Some areas have inclusions of Becket and Skerry soils with dense substrata. Also included are small areas of Bice soils with a non-stony surface. In some areas, the surface texture is very fine sandy loam or loam. Included areas make up about 20 percent of this unit and range up to 5 acres.

Soil Properties—

Permeability: moderate or moderately rapid throughout
Available water capacity (average for 40-inch profile): moderate to high
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted

Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in pasture or woodland.

This soil is poorly suited to growing cultivated crops and hay because of the large surface stones. Stone clearing will be necessary to accommodate farm machinery use and avoid excess equipment damage and wear. Conservation tillage systems, crop rotation, stripcropping, and the use of cover crops are good management practices.

This soil is poorly suited to pasture. The large surface stones will discourage good management practices such as yearly mowing, and therefore reduce forage density. Overgrazing should be avoided to reduce soil erosion and encourage key plant species. Rotational grazing, proper stocking rates, and stone clearing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is high. There are no major woodland management limitations for this soil.

Slope is a moderate limitation if this soil is used as a site for dwellings. The strongly sloping areas of this unit will require some grading and landscaping. To help control costs, the design of the dwelling should conform to the natural slope.

The strongly sloping topography is a moderate limitation if this soil is used as a site for local roads and streets. Constructing roads along the contour will minimize the slope limitation.

Permeability and the strongly sloping topography are moderate limitations if this soil is used as a site for septic tank absorption fields. Larger absorption fields may be needed on this soil to prolong the life of the system and increase efficiency. Installation of the absorption fields on lesser sloping inclusions will help reduce costs. Absorption field lines should be installed along the contour of the slope, where possible.

The strongly sloping landscape is a moderate limitation if this soil is used as a site for shallow excavations. Maneuvering equipment for digging on this slope may be difficult in places.

The capability subclass is 6s.

BsD—Bice fine sandy loam, moderately steep, very stony

This very deep and well drained soil occurs on hillsides of glacial till uplands. Large stones cover up to 3 percent of the soil surface. Slopes range from 15 to 35 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 11 inches, dark brown fine sandy loam

Subsoil:
11 to 16 inches, strong brown fine sandy loam
16 to 26 inches, yellowish brown gravelly fine sandy loam

Substratum:
26 to 43 inches, yellowish brown gravelly fine sandy loam
43 to 72 inches, brown gravelly fine sandy loam

Included with this soil in mapping are about 5 percent well drained Monadnock soils having a more reddish brown subsoil. About 5 percent of this unit includes moderately well drained Schroon and Sunapee soils at footslopes and in slightly concave positions. Small areas of very gravelly Hermon and Colton soils occur along

valley sideslopes and near large streams. Some areas have inclusions of Becket and Skerry soils with dense substrata. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate or moderately rapid throughout
Available water capacity (average for 40-inch profile): moderate to high
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland and unimproved pasture.

This soil is poorly suited to growing cultivated crops and hay because of its large surface stones and moderately steep slopes. Stone clearing will be necessary to accommodate farm machinery use and avoid excess equipment damage and wear. Erosion will be a serious management problem in areas of cultivation or other vegetative disturbance.

This soil is poorly suited to pasture. The large surface stones and moderately steep slopes will discourage good management practices such as yearly mowing. Overgrazing should be avoided to reduce the risk of soil erosion and encourage plant growth. Rotational grazing, proper stocking rates, and stone clearing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is high. Moderately steep slopes may limit the safe maneuverability of harvesting equipment on this soil.

The main limitation if this soil is used as a site for dwellings is slope. This moderately steep soil will require considerable grading and landscaping expenses. Designing the dwelling to conform to the natural slope of the land will reduce the slope limitation.

The main limitation if this soil is used as a site for local roads and streets is its moderately steep slopes. Constructing roads along the contour will reduce the slope limitation.

The main limitation if this soil is used as a site for septic tank absorption fields is the moderately steep slope. A better suited site should be considered such as a lesser sloping nearby soil.

The main limitation if this soil is used as a site for shallow excavations is the moderately steep slope. Maneuvering equipment for digging on this slope will be difficult in places and risky at times.

The capability subclass is 7s.

BvB—Bombay loam, 3 to 8 percent slopes

This very deep, gently sloping, and moderately well drained soil occurs on glacial till lowlands.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, dark brown loam

Subsoil:
9 to 16 inches, brown very fine sandy loam
16 to 23 inches, pale brown fine sandy loam
23 to 26 inches, brown fine sandy loam

26 to 34 inches, dark brown gravelly loam
34 to 56 inches, brown gravelly loam

Substratum: 56 to 72 inches, brown gravelly fine sandy loam

Included with this soil in mapping are about 5 percent well drained Madrid soils on more convex positions. About 5 percent of this unit includes somewhat poorly drained Appleton soils on nearly level areas and near drainageways (fig. 12). Small areas of soils similar to the very poorly drained Runeberg soils are included in basin-like areas, drainageways, and seeps. Also, small areas of soils similar to the Roundabout and Rhinebeck soils occur in places having deposits of silts and clay. In some areas, the surface texture is fine sandy loam and silt loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface, moderate or moderately slow in the subsoil, and moderately slow in the substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: perched 18 to 24 inches deep at some time during March through May
Root zone: 24 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Figure 12.—Many of the apple orchards in the Town of Peru are planted on Bombay soils as shown in this photograph. At the crest of the slope, nearly level areas of somewhat poorly drained Appleton soils are drained using subsurface tile. Covertfalls loamy fine sand supports grasses on the footslope.

Most areas of this soil are used as hayland or cultivated crops. It qualifies as prime farmland in Clinton County.

This soil is well suited to growing cultivated crops and hay. Erosion can reduce soil productivity especially on long slopes. Some erosion can be avoided by cultivating along the contour of the land. Conservation tillage systems, crop rotation, stripcropping, and the use of cover crops are good management practices.

This soil is well suited to pasture. Erosion can be a management problem particularly on long slopes that are subjected to heavy grazing. Overgrazing should be avoided. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major limitations in the management of this soil for timber production.

The main limitation if this soil is used as a site for dwellings is the depth to seasonal high water table. A better suited site for dwellings with basements may exist on a slightly higher position in the map unit or on a nearby map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Providing a coarse-grained subgrade will reduce frost action. Adequate surface and subsurface drainage in concave and seep areas will also decrease the potential for frost action and wetness.

The main limitations if this soil is used as a site for septic tank absorption fields are the depth to seasonal high water table and its moderately slow permeability. A better suited site with moderately rapid permeability should be considered. If this soil is used, higher spots within the map unit would likely perform better for this use. Conventional septic system designs will likely perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the depth to seasonal high water table. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil may also occur because of wetness.

The capability subclass is 2e.

Bx—Bucksport mucky peat

This very deep, nearly level, and very poorly drained soil consists of highly decomposed organic deposits in bogs within glacial till plain, lake plain and outwash plain areas. Slopes range up to 1 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 7 inches, dark reddish brown mucky peat

Subsurface layer:
7 to 31 inches, dark reddish brown muck
31 to 47 inches, black muck

Bottom layer:
47 to 72 inches, black muck

Included with this soil in mapping are about 5 percent Wonsqueak soils with thinner organic deposits near streams and the outer fringe of this unit. About 5 percent of this unit consists of Sabattis and Runeberg soils which are dominantly mineral deposits along the edge of this unit. Small areas of Medomak soils are

included in silty sediments along floodplains of larger streams. Some areas similar to Bucksport soils are also included where deposits are more acid. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately slow to moderately rapid throughout
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 12 inches above the surface to 6 inches below the surface during September through July
Root zone: mainly the upper 12 inches
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland.

This soil is poorly suited to growing cultivated crops and hay because of ponding and the seasonal high water table. The soil surface is covered by water during most of the growing season. Drainage would not only be expensive to install and maintain, but would adversely affect important wetlands.

This soil is poorly suited to pasture. The seasonal high water table is near the surface or covers the surface during most of the growing season. Areas of this soil will not support typical pasture plant species. Because ground conditions are too soft for livestock traffic, significant erosion and damage to native vegetation will likely occur from grazing activity. Drier areas should be considered for this use.

The potential productivity for growing balsam fir on this soil is moderately high. However these organic soils have low bearing strength for supporting heavy timber harvesting equipment. Because of the high water table, seedling mortality is severe except for water tolerant species. Limited rooting depth makes windthrow likely. Therefore, selection of water tolerant species and minimal clearcutting are good management practices.

The main limitations if this soil is used as a site for dwellings are the seasonal high water table and the tendency for the soil to subside. A better suited site should be considered for this use such as a higher position nearby.

The main limitations of this soil for local roads and streets are the seasonal high water table or ponding, and frost action. Roads should be routed around these areas where possible. If this soil is used, these structures should be constructed on raised coarse-grained fill material and adequate drainage provided.

The main limitations if this soil is used as a site for septic tank absorption fields are ponding and the moderately slow permeability. A better suited site should be considered for this use.

The main limitations if this soil is used as a site for shallow excavations are ponding and excess organic material. Digging operations will likely be limited to drier periods of the year unless drainage is installed. Sloughing of soil will also occur because of wetness. Because of its high organic content, this soil will not support heavy conventional digging equipment.

The capability subclass is 7w.

CgA—Champlain fine sand, 0 to 3 percent slopes

This very deep, nearly level, and somewhat excessively drained soil formed in medium and high lime sand deposits on outwash plains, deltas, and terraces.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, moderately decomposed needles, moss and roots
2 to 10 inches, very dark grayish brown fine sand

Subsoil:
10 to 21 inches, yellowish brown fine sand
21 to 33 inches, brownish yellow fine sand

Substratum:
33 to 55 inches, mixed yellowish brown and pale brown sand
55 to 72 inches, pale brown sand

Included with this soil in mapping are about 5 percent moderately well drained Mooers and Croghan soils in slight depressions and along drainageways. About 5 percent of this unit consists of Adams soils having a reddish brown subsoil. Also included are small areas of Occur soils where a loamy substratum is within 40 inches of the surface. Small areas having more rock fragments are also included in this unit. Some areas of this unit have surface textures of sand, loamy sand, or loamy fine sand. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland.

This soil is well suited to growing cultivated crops and hay. However, droughtiness can be a limiting factor in crop productivity because of this soil's low available water capacity. Amendments of organic matter will improve the moisture holding ability for plant growth. Because of the rapid permeability, the potential for pesticide and nutrient loss from leaching in this soil is high. Conservation tillage systems, crop rotation, the use of cover crops, manure, and proper application of other soil amendments are good management practices on this soil.

This soil is well suited to pasture. However, droughtiness during the summer can retard forage plants. Selecting pasture plants that are tolerant to low moisture conditions will help sustain optimal forage density. Overgrazing, on the other hand, may enhance competition from weed species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is high. The low available water capacity of this soil allows for severe seedling mortality during summer and other dry periods. Selecting drought tolerant species and planting seedlings while the soil is moist will enhance survival.

There are no major limitations if this soil is used as a site for dwellings with or without basements.

There are no major limitations if this soil is used as a site for local roads and streets.

The main limitation if this soil is used as a site for septic tank absorption fields is the poor ability to filter effluent properly. There is a possibility of ground water contamination because of the rapid permeability. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation of this soil is used as a site for shallow excavations is the danger of cut banks caving in. Mechanically supporting the banks of the excavation will help prevent the possibility of soil caving in on workers or other victims.

The capability subclass is 2s.

CgB—Champlain fine sand, 3 to 8 percent slopes

This very deep, gently sloping, and somewhat excessively drained soil formed in medium and high lime sand deposits on outwash plains, deltas, and terraces.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, moderately decomposed needles, moss and roots
2 to 10 inches, very dark grayish brown fine sand

Subsoil:
10 to 21 inches, yellowish brown fine sand
21 to 33 inches, brownish yellow fine sand

Substratum:
33 to 55 inches, mixed yellowish brown and pale brown sand
55 to 72 inches, pale brown sand

Included with this soil in mapping are about 5 percent moderately well drained Mooers and Croghan soils in slight depressions and along drainageways. About 5 percent of this unit consists of Adams soils having a reddish brown subsoil. Also included are small areas of Occur soils where a loamy substratum is within 40 inches of the surface. Small areas having more than 10 percent rock fragments and strongly sloping areas are also included in this unit. In some areas the surface texture is sand, loamy sand, or loamy fine sand. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland.

This soil is well suited to growing cultivated crops and hay. However, droughtiness can be a limiting factor in the productivity of this soil because of low available water capacity. Amendments of organic matter will improve the moisture holding ability. Erosion may be a problem on long, cultivated slopes and can result in lower crop yields. Because of rapid permeability, the potential for pesticide and nutrient loss from leaching in this soil is high. Conservation tillage systems, crop rotation, the use of cover crops and manure and the proper application of other soil amendments are good management practices on this soil.

This soil is well suited to pasture. However, droughtiness during the summer can retard forage plants. Selecting pasture plants that are tolerant to low moisture conditions will help sustain optimal forage density. Overgrazing, on the other hand, may enhance competition from weed species. Rotational grazing, proper stocking rates and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is high. The low water holding capacity of this soil allows for severe seedling mortality during summer and other dry periods. Selecting drought tolerant species and planting seedlings while the soil is moist will enhance survival.

There are no major limitations if this soil is used as a site for dwellings with or without basements.

There are no major limitations for local roads and streets on this soil.

The main limitation if this soil is used as a site for septic tank absorption fields is the soil's poor ability to filter effluent properly. There is a possibility of ground water contamination because of the rapid permeability. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the danger of cut banks caving in. Mechanically supporting the banks of the excavation will help prevent the possibility of soil caving in on workers or other victims

The capability subclass is 2s.

CgC—Champlain fine sand, 8 to 15 percent slopes

This very deep, strongly sloping, and somewhat excessively drained soil formed in medium and high lime sand deposits on outwash plains, deltas, and terraces.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, moderately decomposed needles, moss and roots
2 to 10 inches, very dark grayish brown fine sand

Subsoil:
10 to 21 inches, yellowish brown fine sand
21 to 33 inches, brownish yellow fine sand

Substratum:
33 to 55 inches, mixed yellowish brown and pale brown sand
55 to 72 inches, pale brown sand

Included with this soil in mapping are about 5 percent moderately well drained Mooers and Croghan soils in slight depressions and along drainageways. About 5 percent of this unit consists of Adams soils having a reddish brown subsoil. Also included are small areas of Occur soils where a loamy substratum is within 40 inches of the surface. Small areas having more than 10 percent rock fragments and moderately steep areas are also included in this unit. In some areas the surface texture is sand, loamy sand or loamy fine sand. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland.

This soil is moderately suited to growing cultivated crops and hay. Erosion may be a management problem on long slopes planted to row crops. Future crop productivity may be reduced by subsequent loss of valuable topsoil. Cultivating along the contour of the landscape is a way to help minimize erosion. Droughtiness can be a limiting factor in the productivity of this soil because of low available water capacity. Amendments of organic matter will improve the moisture holding ability of the soil. Because of rapid permeability, the potential for pesticide and nutrient loss from leaching in this soil is high. Conservation tillage systems, crop rotation, the use of cover crops and manure and the proper application of other soil amendments are good management practices on this soil.

This soil is moderately suited to pasture. Droughtiness during the summer can significantly retard forage production. Selecting pasture plants that are tolerant to low moisture conditions will improve forage density. Overgrazing may also reduce potential forage production. Deferred grazing will help reduce soil erosion and sustain desired pasture species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is high. The low available water capacity of this soil allows for severe seedling mortality during summer and other dry periods. Selecting drought tolerant species and planting seedlings while the soil is moist will enhance survival.

The main limitation if this soil is used as a site for dwellings is slope. Designing structures to conform to the natural terrain is a way to overcome the slope limitation. More grading and land shaping will be needed on this soil than on less sloping units.

The main limitation if this soil is used as a site for local roads and streets is slope. Constructing roads along the contour will reduce the slope limitation.

The main limitation if this soil is used as a site for septic tank absorption fields is the poor ability to filter effluent properly. There is a possibility of ground water contamination because of rapid permeability. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the danger of cut banks caving in. Mechanically supporting the banks of the excavation will help prevent the possibility of soil caving in on workers or other victims.

The capability subclass is 3e.

ChF—Champlain and Adams soils, very steep

This unit consists of very deep, somewhat excessively drained to well drained soils in ravines, on valley sides, and on the sides of glacial outwash terraces. Most areas of this unit are long and narrow. Some areas consist mostly of Champlain soils, some mostly of Adams soils, and some of both. In general, this unit is about 45 percent Champlain soils, 40 percent Adams soils, and 15 percent other soils. The Champlain and Adams soils were mapped together in very steep areas because they have no major differences in use and management. Slopes range from 25 to 70 percent, but are dominantly 35 to 60 percent.

The typical sequence, depth, and composition of the layers of the Champlain soils are as follows—

Surface layer:
0 to 2 inches, moderately decomposed needles, moss and roots
2 to 10 inches, very dark grayish brown fine sand

Subsoil:
10 to 21 inches, yellowish brown fine sand
21 to 33 inches, brownish yellow fine sand

Substratum:
33 to 55 inches, mixed yellowish brown and pale brown sand
55 to 72 inches, pale brown sand

The typical sequence, depth, and composition of the layers in the Adams soils are as follows—

Surface layer:
0 to 7 inches, very dark grayish brown loamy sand

Subsurface layer:
7 to 9 inches, pinkish gray sand

Subsoil:
9 to 11 inches, dark reddish brown loamy sand
11 to 13 inches, dark brown loamy sand
13 to 27 inches, strong brown sand

Substratum:
27 to 35 inches, yellowish brown fine sand
35 to 72 inches, brown sand

Included with this soil in mapping are about 5 percent moderately well drained Croghan soils and somewhat poorly drained Wainola soils at toeslopes and along drainageways. About 5 percent of this unit consists of Colton and Hermon soils having gravelly or very gravelly profiles. Also included in this unit are small less sloping areas, and small areas where a loamy substratum is within 40 inches of the surface. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties of the Champlain soils—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Adams soils—

Permeability: rapid in the surface and subsoil, and very rapid in the substratum
Available water capacity (average for 40-inch profile): very low or low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 72 inches

Most areas of this unit are in woodland.

The soils in this unit are not suited to growing cultivated crops and hay. The very steep slopes create a serious erosion hazard and make this soil very difficult to properly manage. Because of rapid permeability, the potential for pesticide and nutrient loss from leaching in this soil type is high.

The soils in this unit are not suited to pasture. The very steep slopes make proper management difficult, and can create a serious erosion problem.

The potential productivity for growing eastern white pine on this unit is high. The very steep slopes limit the safe use of harvest equipment. Seedling mortality is generally severe because of droughtiness. Selecting species tolerant of dry soil conditions will enhance seedling survival. Erosion can be a management problem where vegetation is removed from this area. Minimizing clear-cutting and placing logging roads on the contour will help prevent excessive erosion.

The main limitation if this unit is used as a site for dwellings is slope. A better suited site on lesser sloping soils should be considered. Extensive land grading and shaping will be necessary on this unit. Designing the dwelling to conform to the natural terrain will also help reduce the slope limitation.

The main limitation if this unit is used as a site for local roads and streets is slope. Constructing roads along the contour will reduce the slope limitation. However, costs of grading and landscaping will be high for this soil compared to lesser sloping map units.

The main limitations if this unit is used as a site for septic tank absorption fields are slope and poor filtering ability. A better suited site should be considered for this use. Because of rapid permeability and very steep slopes, use of this unit for effluent disposal may result in seepage and ground water contamination.

The main limitations if this unit is used as a site for shallow excavations are the very steep slopes and the tendency of the soils to cave in. Maneuvering machinery on these slopes will be very difficult and risky. The banks of the excavation should be mechanically supported to avoid the possibility of soil falling on workers or other victims.

The capability subclass is 7e.

Ck—Churubusco muck

This shallow to moderately deep, nearly level, and very poorly drained soil formed organic deposits over sandstone bedrock in basin-like areas. Slopes range up to 2 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, dark reddish brown mucky peat
2 to 11 inches, very dark gray muck

Subsurface layer:
11 to 32 inches, black muck
32 inches, light gray sandstone bedrock

Included with this soil in mapping are about 5 percent Wonsqueak soils in areas where the bedrock is deeper than 60 inches. About 5 percent of this unit consist of very poorly drained soils similar to Sabattis soils which are dominantly mineral, and organic deposits that are less than 16 inches deep to bedrock. Also included are about 5 percent somewhat poorly drained Topknot soils in shallow till deposits near the margins of units. Small areas of shallow well drained Irona and moderately deep Conic soils are on knolls and benches. Small areas of poorly drained sandy soils that are shallow to bedrock are also included. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate or moderately rapid throughout
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: ranges from 12 inches above the surface to 12 inches deep from September through June
Root zone: mainly the upper 12 inches
Shrink-swell potential: low
Depth to bedrock: 16 to 50 inches

Most areas of this unit are in wetland woods or brush.

This unit is not suited to growing cultivated crops and hay. The surface is ponded or saturated for much of the year, including a substantial portion of the growing season.

This unit is not suited to pasture. The seasonal high water table is near the surface or covers the surface during most of the year. The productivity of this soil for typical pasture plants is limited. Ground conditions are generally too soft to support livestock traffic.

The potential productivity for growing black spruce on Churubusco soil is moderate. However, the organic material has low bearing strength for supporting

heavy timber harvesting equipment. Because of the depth to seasonal high water table, seedling mortality is severe except for water tolerant species. Because of the shallow rooting depth, there is a potential for windthrow. Selecting shallow rooted species and minimizing thinning practices will help prevent excessive windthrow.

The main limitations of this soil is used as a site for dwellings are the depth to seasonal high water table, low bearing strength, and depth to rock. Better suited soils should be considered for this use. The soil is ponded for much of the year. The organic material will not support conventional heavy construction equipment. Because of its low position on the landscape, this soil is difficult to drain without destroying important wetland.

The main limitations if this soil is used as a site for local roads and streets are the seasonal high water table and potential frost action. Roads should be routed around this area where possible. Constructing roads on raised coarse grained fill material and providing adequate drainage will help alleviate wetness and frost action. Excavation of organic material and substantial fill will likely be required to provide a stable road bed.

The main limitations if this soil is used as a site for septic tank absorption fields are the depth to seasonal high water table and the depth to bedrock. A better suited site should be considered for this use. The prolonged ponding and seasonal high water table create a severe risk of pollution of groundwater or effluent seepage on the surface if this soil is used for septic fields.

The main limitations if this soil is used as a site for shallow excavations are the depth to seasonal high water table, excess humus, the depth to rock, and the tendency of cutbanks to cave. Digging operations will be limited to the driest periods of the year unless drainage is enhanced. Excavations in the hard sandstone bedrock will likely require blasting. Cutbanks in this soil tend to cave in because of wetness and the high organic matter content. Mechanically supporting the sides of excavations will help prevent the soil from sloughing.

The capability subclass is 7w.

ClC—Colosse-Hermon complex, strongly sloping, very stony

This very deep, excessively drained and somewhat excessively drained soil occurs on knolls and undulating or rolling plains dominated by gravelly and sandy deposits. Large stones and boulders cover up to 3 percent of the soil surface. The Colosse soils occur in the more loamy part of this unit where the slope is generally more uniform. Hermon soils occur in the very cobbly and sandy areas that are more undulating or rolling. This unit consists of about 40 percent Colosse soils, 40 percent Hermon soils, and 20 percent other soils. The Colosse and Hermon soils are so intermingled that it was not practical to map them separately. Slopes range from 3 to 15 percent.

The typical sequence, depth, and composition of the layers of the Colosse soil are as follows—

Surface layer:
0 to 2 inches, black moderately decomposed leaves, roots, and twigs
2 to 6 inches, pinkish gray, very cobbly fine sandy loam

Subsoil:
6 to 13 inches, brown, very cobbly fine sandy loam
13 to 23 inches, strong brown, very cobbly fine sandy loam
23 to 30 inches, yellowish brown and dark yellowish brown, very cobbly fine sandy loam

Substratum:
30 to 37 inches, yellowish brown and dark yellowish brown, extremely cobbly loamy sand
37 to 72 inches, brown, dark grayish brown and pale brown, extremely cobbly sand

The typical sequence, depth, and composition of the layers of the Hermon soil are as follows—
Surface layer:
3 inches thick layer of leaves and needles
0 to 2 inches, black fine sandy loam

Subsurface layer:
2 to 6 inches, reddish gray fine sandy loam

Subsoil:
6 to 10 inches, dark brown fine sandy loam
10 to 28 inches, strong brown very gravelly loamy sand
28 to 37 inches, dark yellowish brown very cobbly loamy sand

Substratum:
37 to 54 inches, brown very cobbly loamy sand
54 to 72 inches, brown cobbly loamy sand

Included in this map unit are about 5 percent moderately well drained Fahey soils along the fringe of ridges and in slight depressions. About 5 percent of this unit includes soil with sandstone bedrock within a depth of 60 inches. This unit includes soils similar to Monadnock and Sunapee with dominantly loamy textures and fewer rock fragments. Also included are areas having sandy textures but fewer rock fragments than either Colosse or Hermon soils. Some areas are extremely stony or bouldery. Inclusions make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties of the Colosse soils—

Permeability: moderately rapid in the mineral surface and subsoil, and rapid in the substratum
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: up to 30 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Hermon soils—

Permeability: moderately rapid or rapid in the mineral surface and subsoil and rapid in the substratum
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: up to 30 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this map unit are in woodland or unimproved pasture.

This unit is poorly suited to growing cultivated crops and hay because of large surface stones. Stone removal will be needed for most farm equipment use. Erosion can be a problem particularly on strongly sloping areas planted to row crops. Droughtiness may also be a significant management problem. Because of rapid permeability and the very cobbly nature of this unit, the potential for pesticide and

nutrient loss from leaching in this soil is high. Stone removal, conservation tillage systems, crop rotation and the use of cover crops are good management practices.

This unit is poorly suited to pasture. The large surface stones tend to discourage proper pasture management such as yearly mowing. Erosion can be a significant management problem on heavily grazed areas of this soil. Overgrazing tends to accelerate soil erosion and discourage key plant species. Also, droughtiness during summer may reduce forage production. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on areas of Colosse soils is moderate. The potential productivity for growing eastern white pine on areas of Hermon soils is high. Although there are no major management problems on this unit, large surface stones can create make maneuvering planting equipment difficult. Because of low available water capacity in parts of this unit, seedling mortality may result from soil droughtiness.

The main limitations if this unit is used as a site for dwellings with basements are large surface stones and strongly sloping areas. Stones and strongly sloping areas can make excavation more difficult and result in higher landscaping costs. Designing the dwelling to conform to the natural slope will likely decrease the amount of smoothing and grading needed.

The main limitations if this unit is used as a site for local roads and streets are large surface stones and strongly sloping areas. These large stones will likely result in somewhat higher costs for road excavation and grading. Constructing roads along the contour will reduce the amount of grading required.

The main limitation if this unit is used as a site for septic tank absorption fields is the soil's poor ability to filter effluent properly. A better suited site should be considered for this use such as a nearby more moderately permeable soil. Because of rapid permeability, there is a possibility of ground water contamination in this unit. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this unit is used as a site for shallow excavations is tendency of the soil to cave in. The banks of the excavations can be mechanically supported to prevent soil from caving in on workers or other possible victims

The capability subclass is 6s.

CmB—Colosse-Trout River complex, gently sloping

This unit consists of very deep, excessively drained soils on slightly convex, linear ridges. The Colosse soils occur in the more loamy part of the complex where the slope is generally more uniform. The Trout River soils occur in the very cobbly and sandy part of the ridge, particularly where the slope is more undulating. This unit consists of about 45 percent Colosse soils, 40 percent Trout River soils, and 15 percent other soils. The Colosse and Trout River soils are so intermingled that it was not practical to map them separately. Slopes range from 3 to 8 percent.

The typical sequence, depth, and composition of the layers of the Colosse soil are as follows—

Surface layer:

0 to 2 inches, black moderately decomposed leaves, roots, and twigs

2 to 6 inches, pinkish gray, very cobbly fine sandy loam

Subsoil:

6 to 13 inches, brown, very cobbly fine sandy loam

13 to 23 inches, strong brown, very cobbly fine sandy loam

23 to 30 inches, yellowish brown and dark yellowish brown, very cobbly fine sandy loam

Substratum:
30 to 37 inches, yellowish brown and dark yellowish brown, extremely cobbly loamy sand
37 to 72 inches, brown, dark grayish brown and pale brown, extremely cobbly sand

The typical sequence, depth, and composition of the layers of the Trout River soil are as follows—
Surface layer:
0 to 1 inch thick black moderately decomposed leaves
1 to 3 inches, very dark brown very gravelly loamy sand

Subsurface layer:
3 to 6 inches, reddish gray very gravelly loamy sand

Subsoil:
6 to 8 inches, dark reddish brown very gravelly loamy sand
8 to 17 inches, brown very gravelly loamy sand
17 to 31 inches, mixed strong brown and brown extremely gravelly sand

Substratum:
31 to 72 inches, mixed brown extremely gravelly sand

Included within this map unit are about 5 percent moderately well drained Fahey soils along the fringe of ridges and in slight depressions. About 5 percent of this unit includes Adams soil having few rock fragments, and other soils with less gravel than Colosse or Trout River soils. Also included are small areas underlain by either loamy deposits or sandstone bedrock within 60 inches. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties of the Colosse soils—

Permeability: moderately rapid in the mineral surface and subsoil, and rapid in the substratum
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: up to 30 inches deep or more
Shrink-swell potential: low
iDepth to bedrock: greater than 60 inches

Soil Properties of the Trout River—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: up to 30 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this map unit are in hay or used for growing corn.

This unit is moderately well suited to growing cultivated crops and hay. Droughtiness may limit productivity especially in the Trout River portion of this unit because of the very low available water capacity. Amendments of organic matter will improve the soil's ability to retain moisture. Also, because of high gravel and cobblestone content in these soils, cultivating equipment will be subject to excessive wear compared to other less gravelly soils. Conservation tillage systems, crop rotation, stripcropping, the use of cover crops, and the proper use of manure and other supplements are good management practices.

This unit is moderately well suited to pasture. Droughtiness during the summer may adversely affect forage production especially on Trout River portion of this unit. Deferred grazing during dry periods will help maintain key pasture species. Also, overgrazing will increase weed competition and reduce key forage species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on areas of Colosse soils is moderate. The potential productivity for growing eastern white pine on areas of Trout River soils is high. There are no major woodland management problems on this unit.

There are no major limitations if this unit is used as a site for dwellings with or without basements. Large stones can make excavation more difficult and result in higher landscaping costs.

There are no major limitations if this unit is used as a site for local roads and streets. Large stones can make excavation more difficult and result in higher landscaping costs.

The main limitation if this unit is used as a site for septic tank absorption fields is the soil's poor ability to filter effluent properly. A better suited site should be considered for this use such as a nearby, more moderately permeable soil. Because of rapid permeability, there is a possibility of ground water contamination. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation of this unit is used as a site for shallow excavations is the tendency of the soil to cave in. The banks of the excavation can be mechanically supported to prevent soil from caving in on workers or other victims.

The capability subclass is 3s.

CmC—Colosse - Trout River complex, strongly sloping

This unit consists of very deep, excessively drained soils on generally convex, linear ridges. The Colosse soils occur in the more loamy part of the complex where the slope is generally more uniform. The Trout River soils occur in the very cobbly and sandy part of the ridge, particularly where the slope is more rolling. This unit consists of about 45 percent Colosse soils, 40 percent Trout River soils, and 15 percent other soils. The Colosse and Trout River soils are so intermingled that it was not practical to map them separately. Slopes range from 8 to 15 percent.

The typical sequence, depth, and composition of the layers of the Colosse soil are as follows—

Surface layer:

0 to 2 inches, black moderately decomposed leaves, roots, and twigs

2 to 6 inches, pinkish gray, very cobbly fine sandy loam

Subsoil:

6 to 13 inches, brown, very cobbly fine sandy loam

13 to 23 inches, strong brown, very cobbly fine sandy loam

23 to 30 inches, yellowish brown and dark yellowish brown, very cobbly fine sandy loam

Substratum:

30 to 37 inches, yellowish brown and dark yellowish brown, extremely cobbly loamy sand

37 to 72 inches, brown, dark grayish brown and pale brown, extremely cobbly sand

The typical sequence, depth, and composition of the layers of the Trout River soil are as follows—

Surface layer:

0 to 1 inch thick black moderately decomposed leaves

1 to 3 inches, very dark brown very gravelly loamy sand

Subsurface layer:
3 to 6 inches, reddish gray very gravelly loamy sand

Subsoil:
6 to 8 inches, dark reddish brown very gravelly loamy sand
8 to 17 inches, brown very gravelly loamy sand
17 to 31 inches, mixed strong brown and brown extremely gravelly sand

Substratum:
31 to 72 inches, mixed brown extremely gravelly sand

Included within this map unit are about 5 percent moderately well drained Fahey soils along the fringe of ridges and in slight depressions. About 5 percent of this unit includes Adams soil having few rock fragments, and other soils with less gravel than Colosse or Trout River soils. Also included are small areas underlain by either loamy deposits or sandstone bedrock within 60 inches. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties of the Colosse soils—

Permeability: moderately rapid in the mineral surface and subsoil, and rapid in the substratum
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: up to 30 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Trout River—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: up to 30 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this map unit are in hay.

Much of this unit is poorly suited to growing cultivated crops and hay. Droughtiness can be a significant production limitation during dry summers because of a very low available water capacity in Trout River soils. Erosion may be a problem on long slopes planted to row crops. Future crop productivity may be reduced by loss of valuable topsoil. Care should be taken when cultivating by travelling parallel to the contour. Conservation tillage systems, crop rotation, stripcropping, the use of cover crop, and the proper use of manure and other supplements are good management practices.

This unit is suited to pasture. However, droughtiness during the summer may significantly reduce forage production especially on Trout River portion of this unit. Deferred grazing during dry periods will help maintain key pasture species. Erosion can also be a management problem on heavily grazed areas of this unit. Overgrazing tends to accelerate soil erosion and discourage key plant species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on areas of Colosse soils is moderate. The potential productivity for growing eastern white pine on areas of Trout River soils is high. There are no major management problems on this unit for woodland.

Slope and large stones are moderate limitations if this unit is used as a site for dwellings. These slopes will require some grading and landscaping expenses. Designing the dwelling to the natural slope will likely decrease the amount of grading needed.

Slope and large stones are moderate limitations if this unit is used as a site for local roads and streets. These areas will likely result in somewhat higher costs for road grading and roadbank stabilization than nearly level areas.

The main limitation if this unit is used as a site for septic tank absorption fields is the soil's poor ability to filter effluent properly. A better suited site should be considered for this use such as a nearby more moderately permeable soil. Because of the rapid permeability of these soils, there is a possibility of ground water contamination. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this unit is used as a site for shallow excavations is the tendency of the soil to cave in. The banks of the excavation can be mechanically supported to prevent soil from caving in on workers or other victims.

The capability subclass is 4s.

CnC—Colosse-Trout River complex, strongly sloping, very stony

This very deep, excessively drained map unit occurs on convex, linear ridges of gravelly and sandy deposits. Large stones cover up to 3 percent of the soil surface. The Colosse soils occur in the more loamy part of the complex where the slope is generally more uniform. The Trout River soils occur in the very cobbly and sandy part of the ridge, particularly where the slope is more rolling. This unit consists of about 45 percent Colosse soils, 40 percent Trout River soils, and 15 percent other soils. The Colosse and Trout River soils are so intermingled that it was not practical to map them separately. Slopes range from 3 to 15 percent.

The typical sequence, depth, and composition of the layers of the Colosse soil are as follows—

Surface layer:
0 to 2 inches, black moderately decomposed leaves, roots, and twigs
2 to 6 inches, pinkish gray, very cobbly fine sandy loam

Subsoil:
6 to 13 inches, brown, very cobbly fine sandy loam
13 to 23 inches, strong brown, very cobbly fine sandy loam
23 to 30 inches, yellowish brown and dark yellowish brown, very cobbly fine sandy loam

Substratum:
30 to 37 inches, yellowish brown and dark yellowish brown, extremely cobbly loamy sand
37 to 72 inches, brown, dark grayish brown and pale brown, extremely cobbly sand

The typical sequence, depth, and composition of the layers of the Trout River soil are as follows—

Surface layer:
0 to 1 inch thick black moderately decomposed leaves
1 to 3 inches, very dark brown very gravelly loamy sand

Subsurface layer:
3 to 6 inches, reddish gray very gravelly loamy sand

Subsoil:
6 to 8 inches, dark reddish brown very gravelly loamy sand
8 to 17 inches, brown very gravelly loamy sand
17 to 31 inches, mixed strong brown and brown extremely gravelly sand

Substratum:
31 to 72 inches, mixed brown extremely gravelly sand

Included within this map unit are about 5 percent moderately well drained Fahey soils along the fringe of ridges and in slight depressions. About 5 percent of this unit includes Adams soil having few rock fragments, and other areas with less gravel than Colosse or Trout River soils. Also included are small areas underlain by either loamy deposits or sandstone bedrock within 60 inches. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties of the Colosse soils—

Permeability: moderately rapid in the mineral surface and subsoil, and rapid in the substratum
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: up to 30 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Trout River soils—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: up to 30 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this map unit are in woodland or unimproved pasture.

This unit is poorly suited to growing cultivated crops and hay because of large surface stones. Stone removal will be needed for most farm equipment use. Erosion can be a problem on strongly sloping areas planted to row crops. Droughtiness may also be a significant management problem, particularly on the Trout River portion of this map unit. Stone removal, conservation tillage systems, crop rotation, stripcropping, the use of cover crops, and the proper use of manure and other supplements are good management practices.

This unit is poorly suited to pasture. The large surface stones discourage proper management such as yearly mowing. Erosion can be a significant problem on heavily grazed areas of this soil. Overgrazing tends to accelerate soil erosion and discourage key plant species. Also, droughtiness may significantly reduce forage production especially on Trout River portion of this unit. Rotational grazing, proper stocking rates and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on areas of Colosse soils is moderate. The potential productivity for growing eastern white pine on areas of Trout River soils is high. Although there are no major management problems on this unit, large surface stones can create maneuvering difficulty with planting equipment. Because of very low available water capacity on the Trout River portion of this unit, seedling mortality may result from droughtiness.

The main limitations if this unit is used as a site for dwellings with basements are large stones and strongly sloping areas. Surface stones, cobblestones, and strongly sloping areas of this unit can make excavation more difficult and result in higher

landscaping costs. Designing the dwelling to the natural slope will likely decrease the amount of smoothing and grading needed.

The main limitations if this unit is used as a site for local roads and streets are large surface stones and strongly sloping areas. These large stones will likely result in somewhat higher costs for road excavation and grading. Construction of new roads along the contour of slope, where possible, will reduce the amount of grading required.

The main limitation if this unit is used as a site for septic tank absorption fields is the soil's poor ability to filter effluent properly. A better suited site should be considered for this use such as a nearby, more moderately permeable soil. Because of the rapid permeability of these soils, there is a possibility of ground water contamination. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this unit is used as a site for shallow excavations is the soil's tendency to cave in. The banks of the excavation can be mechanically supported to prevent soil from caving in on workers or other victims.

The capability subclass is 6s.

CnD—Colosse-Trout River complex, moderately steep, very stony

This unit consists of very deep, excessively drained soils. It occurs on convex, linear ridges of gravelly and sandy deposits. Large stones cover up to 3 percent of the soil surface. The Colosse soils occur in the more loamy part of the complex where slope is generally more uniform. The Trout River soils occur in the very cobbly and sandy part of the ridge, particularly where the slope is hillier. This unit consists of about 45 percent Colosse soils, 40 percent Trout River soils, and 15 percent other soils. The Colosse and Trout River soils are so intermingled that it was not practical to map them separately. Slopes range from 15 to 25 percent.

The typical sequence, depth, and composition of the layers of the Colosse soil are as follows—

Surface layer:

0 to 2 inches, black moderately decomposed leaves, roots, and twigs

2 to 6 inches, pinkish gray, very cobbly fine sandy loam

Subsoil:

6 to 13 inches, brown, very cobbly fine sandy loam

13 to 23 inches, strong brown, very cobbly fine sandy loam

23 to 30 inches, yellowish brown and dark yellowish brown, very cobbly fine sandy loam

Substratum:

30 to 37 inches, yellowish brown and dark yellowish brown, extremely cobbly loamy sand

37 to 72 inches, brown, dark grayish brown and pale brown, extremely cobbly sand

The typical sequence, depth, and composition of the layers of the Trout River soil are as follows—

Surface layer:

0 to 1 inch thick black moderately decomposed leaves

1 to 3 inches, very dark brown very gravelly loamy sand

Subsurface layer:

3 to 6 inches, reddish gray very gravelly loamy sand

Subsoil:
6 to 8 inches, dark reddish brown very gravelly loamy sand
8 to 17 inches, brown very gravelly loamy sand
17 to 31 inches, mixed strong brown and brown extremely gravelly sand

Substratum:
31 to 72 inches, mixed brown extremely gravelly sand

Included within this map unit are about 5 percent moderately well drained Fahey soils along the fringe of ridges and in slight depressions. About 5 percent of this unit includes Adams soil having few rock fragments, and areas with less gravel than Colosse or Trout River soils. Also included are small areas underlain by either loamy deposits or sandstone bedrock within 60 inches. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties of the Colosse soils—

Permeability: moderately rapid in the mineral surface and subsoil, and rapid in the substratum
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: up to 30 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Trout River—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: up to 30 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this map unit are in woodland.

This unit is poorly suited to growing cultivated crops and hay because of large surface stones and moderately steep slopes. Stone removal will enhance this area for more equipment use. Erosion can be a problem on long slopes and on areas planted to row crops. Droughtiness may also be a significant management problem, particularly on the Trout River portion of this map unit.

This unit is poorly suited to pasture. Large surface stones and moderately steep slopes tend to discourage proper pasture management such as yearly mowing. Erosion can be a significant management problem on heavily grazed areas of this soil. Also, droughtiness during summer may threaten optimal forage production especially on the Trout River portion of this unit. Stone removal, rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on areas of Colosse soils is moderate. The potential productivity for growing eastern white pine on areas of Trout River soils is high. Although there are no major management problems on this unit, large surface stones and moderately steep slopes can create some maneuvering difficulty with planting or harvest equipment. Because of very low available water capacity on the Trout River portion of this unit, severe seedling mortality may result from droughtiness.

The main limitation if this unit is used as a site for dwellings with basements is moderately steep areas. These moderately steep slopes will also require more grading and landscaping expenses than lesser sloping areas. Designing the dwelling to the natural slope will decrease the amount of smoothing and grading needed.

The main limitation if this unit is used as a site for local roads and streets is moderately steep areas. Construction costs associated with road excavation and grading will be higher on this unit than lesser sloping areas. Construction of new roads along the contour of slope, or bypassing this unit altogether, will reduce the amount of grading and roadbank stabilization required.

The main limitations if this unit is used as a site for septic tank absorption fields are the soil's poor ability to filter effluent properly and moderately steep slopes. A better suited site should be considered for this use such as a nearby soil on lesser sloping areas. Because of rapid permeability, there is a possibility of ground water contamination. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this unit is used as a site for shallow excavations is the moderately steep slopes and the tendency of the soils to cave in. The banks of the excavation can be mechanically supported to prevent soil from caving in on workers or other victims. Maneuvering digging equipment in a safe manner will be more difficult on this unit than less sloping areas.

The capability subclass is 6s.

CoA—Colton gravelly loamy coarse sand, 0 to 3 percent slopes

This very deep, nearly level, and excessively drained soil occurs on sandy glacial outwash plains and terraces.

The typical sequence, depth, and composition of the layers of Colton soil are as follows—

Surface layer:
0 to 1 inch, black highly decomposed organic material

Subsurface layer:
1 to 3 inches, dark brown gravelly loamy coarse sand

Subsoil:
3 to 8 inches, dark brown and strong brown gravelly loamy coarse sand
8 to 15 inches, strong brown gravelly loamy coarse sand
15 to 22 inches, yellowish brown very gravelly coarse sand

Substratum:
22 to 72 inches, yellowish brown and brown very gravelly coarse sand

Included with this soil in mapping are about 5 percent Adams soils in places where the gravel content is low. About 5 percent of this unit includes Hermon, Monadnock, and Bice soils where unsorted glacial till deposits exist. Near large streams like the Saranac River, this unit has inclusions of similar soil subject to flooding. Also included with this soil in mapping are small areas of moderately well drained Fahey soils in slightly concave areas near glacial lake beach ridges. Small areas of Coveytown and Wainola soils occur in swales and near drainageways. In some areas the surface texture is cobbly loamy sand and gravelly sandy loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the mineral surface and subsoil, and very rapid in the substratum
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: deeper than 72 inches
Root zone: generally unrestricted

Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in hay or corn. Some areas are used for pasture and woodland.

This soil is moderately suited to growing cultivated crops and hay. Droughtiness can be a limiting factor in the productivity of this soil because of its very low available water capacity. Amendments of organic matter will improve the moisture holding ability. Because of the rapid permeability, the potential for pesticide and nutrient loss from leaching in this soil is intermediate to high. Conservation tillage systems, crop rotation, stripcropping, the use of cover crops, and proper application of manure and other supplements are good management practices.

This soil is moderately suited to pasture. Droughtiness during the summer can threaten optimal forage density. Key pasture plants should be tolerant to dry soil conditions for short periods of time. Overgrazing will reduce potential forage production and enhance competition from weed species. Rotational grazing, proper stocking rates and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on Colton soil is very high. Because of the very low available water capacity in this soil, droughtiness can result in severe seedling mortality. Selecting species that are tolerant of dry soil conditions and planting seedlings when the soil is moist will help improve the rate of seedling survival. There are no other major management limitations for woodland on this soil.

There are no major limitations is this map unit is used as a site for dwellings with or without basements.

There are no major limitations for local roads and streets on this soil.

The main limitation if this soil is used as a site for septic tank absorption fields is its poor ability to filter effluent. Because of the very rapid permeability, there is a possibility of ground water contamination. A better suited site, such as a nearby more moderately permeable soil, should be considered for this use. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this map unit is used as a site for shallow excavations is the soil's tendency to cave in. The banks of the excavation can be mechanically supported to help avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 3s.

CoB—Colton gravelly loamy coarse sand, 3 to 8 percent slopes

This very deep, gently sloping, and excessively drained soil occurs on sandy glacial outwash plains and terraces.

The typical sequence, depth, and composition of the layers of Colton soil are as follows—

Surface layer:
0 to 1 inch, black highly decomposed organic material

Subsurface layer:
1 to 3 inches, dark brown gravelly loamy coarse sand

Subsoil:
3 to 8 inches, dark brown and strong brown gravelly loamy coarse sand
8 to 15 inches, strong brown gravelly loamy coarse sand
15 to 22 inches, yellowish brown very gravelly coarse sand

Substratum:
22 to 72 inches, yellowish brown and brown very gravelly coarse sand

Included with this soil in mapping are about 5 percent Adams soils in places where gravel content is low. About 5 percent of this unit consists of Hermon, Monadnock, and Bice soils where unsorted glacial till deposits also exist. Also included with this soil in mapping are small areas of moderately well drained Fahey soils in slightly concave areas near glacial lake beach ridges. Small areas of Coveytown and Wainola soils occur in swales and near drainageways. In some areas the surface texture is cobbly loamy sand and gravelly sandy loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the mineral surface and subsoil, and very rapid in the substratum
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: deeper than 72 inches
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in hay or corn. Some areas are used for pasture and woodland.

This soil is moderately suited to growing cultivated crops and hay. Droughtiness can be a limiting factor in the productivity of this soil because of its very low available water capacity. Amendments of organic matter will improve the moisture holding ability of the soil. Because of rapid permeability, the potential for pesticide and nutrient loss from leaching in this soil is intermediate to high. Conservation tillage systems, crop rotation, stripcropping, the use of cover crops, and proper application of manure and other supplements are good management practices.

This soil is moderately suited to pasture. Droughtiness during the summer can threaten optimal forage density. Key pasture plants should be tolerant to dry soil conditions for short periods of time. Overgrazing will reduce potential forage production and enhance competition from weed species. Rotational grazing, proper stocking rates and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on Colton soil is very high. Because of the very low available water capacity in this soil, droughtiness can result in severe seedling mortality. Selecting species that are tolerant of dry soil conditions and planting seedlings when the soil is moist will help improve the rate of seedling survival. There are no other major management limitations for woodland on this soil.

There are no major limitations for dwellings with or without basements on this soil.

There are no major limitations for local roads and streets on this soil.

The main limitation if this soil is used as a site for septic tank absorption fields is the soil's poor ability to filter effluent properly. Because of the very rapid permeability, there is a possibility of ground water contamination. A better suited site, such as a nearby, more moderately permeable soil, should be considered for this use. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation of this soil is used as a site for shallow excavations is the tendency of the soil to cave in. The banks of the excavation can be mechanically supported to help avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 3s.

CoC—Colton gravelly loamy coarse sand, 8 to 15 percent slopes

This very deep, strongly sloping, and excessively drained soil occurs on side slopes of sandy outwash plains and terraces.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, black highly decomposed organic material

Subsurface layer:
1 to 3 inches, dark brown gravelly loamy coarse sand

Subsoil:
3 to 8 inches, dark brown and strong brown gravelly loamy coarse sand
8 to 15 inches, strong brown gravelly loamy coarse sand
15 to 22 inches, yellowish brown very gravelly coarse sand

Substratum:
22 to 72 inches, yellowish brown and brown very gravelly coarse sand

Included with this soil in mapping are about 5 percent Adams soils in places where gravel content is low. About 5 percent of this unit includes Hermon, Monadnock, and Bice soils where unsorted glacial till deposits also exist. Also included with this soil in mapping are small areas of moderately well drained Fahey soils near footslopes and slightly concave areas. Stony or very stony areas are also included. In some areas the surface texture is cobbly loamy sand and gravelly sandy loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the mineral surface and subsoil, and very rapid in the substratum
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: deeper than 72 inches
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in hay or woodland.

This soil is poorly suited to growing cultivated crops and hay. Erosion can be a significant problem on long slopes planted to row crops. Also, droughtiness can be a major limiting factor in productivity because of the very low available water capacity. Amendments of organic matter will improve the moisture holding ability of the soil. Because of rapid permeability, the potential for pesticide and nutrient loss from leaching in this soil is intermediate to high. Conservation tillage systems, crop rotation, stripcropping, the use of cover crops, and proper application of manure and other supplements are good management practices.

This soil is poorly suited to pasture. Droughtiness during the summer can threaten optimal forage density. Key pasture plants tolerant to dry soil conditions should be encouraged. Overgrazing will reduce potential forage production and enhance competition from weed species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on Colton soil is very high. Because of the very low available water capacity, droughtiness can cause severe seedling mortality on this soil. Selecting species that are tolerant of dry soil conditions and planting seedlings when the soil is moist will help improve the rate of seedling survival. There are no other major management limitations for woodland on this soil.

The main limitation if this soil is used as a site for dwellings is slope. These strongly sloping areas will require some grading and landscaping expenses. Designing the dwelling to conform to the natural slope will help reduce the slope limitation.

The main limitation if this soil is used as a site for local roads and streets is slope. Constructing roads along the contour will reduce the slope limitation.

The main limitation if this soil is used as a site for septic tank absorption fields is the soil's poor ability to filter effluent properly. Because of very rapid permeability, there is a possibility of ground water contamination. A better suited site, such as a nearby, more moderately permeable soil, should be considered for this use. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the tendency of the soil to cave in. The banks of the excavation can be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 4e.

CpC—Colton gravelly loamy coarse sand, strongly sloping, very stony

This very deep and excessively drained soil is on terraces, outwash plains, eskers, and on valley sides. Stones cover up to 3 percent of the ground surface. Slopes range from 3 to 15 percent.

The typical sequence, depth, and composition of the layers of Colton soil are as follows—

Surface layer:
0 to 1 inch, black highly decomposed organic material

Subsurface layer:
1 to 3 inches, dark brown gravelly loamy coarse sand

Subsoil:
3 to 8 inches, dark brown and strong brown gravelly loamy coarse sand
8 to 15 inches, strong brown gravelly loamy coarse sand
15 to 22 inches, yellowish brown very gravelly coarse sand

Substratum:
22 to 72 inches, yellowish brown and brown very gravelly coarse sand

Included with this soil in mapping are about 5 percent Adams soils in deposits relatively free of gravels and cobbles. About 5 percent of this unit consists of loamy Monadnock soils and sandy and gravelly Hermon soils in glacial till deposits along valley sides. Also included are small areas of moderately well drained Fahey soils in slightly concave areas. Also included in this unit are small areas with slope less than 3 percent or greater than 15 percent. There are also small areas with few surface stones. In some areas the surface texture is cobbly loamy sand and gravelly sandy loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the mineral surface and subsoil, and very rapid in the substratum
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: deeper than 72 inches
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in woodland. Some areas are used for pasture.

This soil is poorly suited to growing cultivated crops and hay. Large surface stones create a major limitation to cultivation and result in serious wear or damage to farm machinery. Because of the limited productivity of this soil, stone clearing and other improvements may not be cost effective. The very low available water capacity of this soil can seriously limit productivity, especially during prolonged dry periods. Amendments of organic matter will improve the moisture holding ability. Erosion can also be a significant problem on long slopes planted to row crops. Because of rapid permeability, the potential for pesticide and nutrient loss from leaching in this soil is intermediate to high. Stone clearing, conservation tillage systems, crop rotation, stripcropping, the use of cover crops, and proper application of manure and other supplements are good management practices.

This soil is poorly suited to pasture. Large surface stones interfere with pasture management and reduce the potential density of forage plants. Because of the limited productivity of this soil, stone clearing and pasture improvements may not be cost effective. This soil is prone to droughtiness during extended dry periods, which can threaten optimal forage density. Selecting plants which are tolerant of dry soil conditions will help productivity. Overgrazing will also reduce potential forage production and enhance competition from weed species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on Colton soil is very high. Because of the very low available water capacity, this soil tends to be droughty, which in turn results in a severe seedling mortality rate. Selecting species tolerant of dry soil conditions and planting while the soil is moist will promote seedling survival.

The main limitations if this soil is used as a site for dwellings are slope and large surface stones. These strongly sloping areas will require some grading and landscaping expenses. Large stones make excavation of basements and grading around dwellings more difficult and expensive than in non-stony areas.

The main limitations if this soil is used as a site for local roads and streets are slope and large stones. Building roads along the contour will facilitate construction and help minimize costs. The presence of large surface stones may result in higher smoothing and grading costs than in areas of non-stony soils.

The main limitation if this soil is used as a site for septic tank absorption fields is its poor ability to filter effluent properly. Because of very rapid permeability, there is a possibility of ground water contamination. A better suited site, such as a nearby more moderately permeable soil, should be considered for this use. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the tendency for cutbanks to cave in. Mechanically supporting the banks of the excavation will help prevent the possibility of soil caving in on workers or other victims.

The capability subclass is 6s.

CpE—Colton gravelly loamy coarse sand, steep, very stony

This very deep and excessively drained soil is on the sides of terraces, outwash plains, and eskers, and on valley sides. Stones cover up to 3 percent of the ground surface. Slopes range from 15 to 35 percent, but are dominantly 25 to 35 percent.

The typical sequence, depth, and composition of the layers of Colton soil are as follows—

Surface layer:

0 to 1 inch, black highly decomposed organic material

Subsurface layer:
1 to 3 inches, dark brown gravelly loamy coarse sand

Subsoil:
3 to 8 inches, dark brown and strong brown gravelly loamy coarse sand
8 to 15 inches, strong brown gravelly loamy coarse sand
15 to 22 inches, yellowish brown very gravelly coarse sand

Substratum:
22 to 72 inches, yellowish brown and brown very gravelly coarse sand

Included with this soil in mapping are about 5 percent Adams soils in deposits relatively free of gravels and cobbles. About 5 percent of this unit consists of loamy Monadnock soils and sandy and gravelly Hermon soils in glacial till deposits along valley sides. Included in this unit are small areas with slope less than 15 percent or greater than 35 percent. Also, there are small areas with few surface stones. In some areas the surface texture is cobbly loamy sand and gravelly sandy loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the mineral surface and subsoil, and very rapid in the substratum
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: deeper than 72 inches
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in woodland.

This soil is not suited to growing cultivated crops and hay. Large surface stones and steep slopes create major limitations to cultivation. The steep slopes also create an erosion hazard where vegetation is removed or the soil is disturbed. Because of rapid permeability, the potential for pesticide and nutrient loss from leaching in this soil is intermediate to high.

This soil is not suited to pasture. Large surface stones interfere with pasture management and reduce the potential density of forage plants. The steep terrain makes proper management difficult and creates an erosion hazard.

The potential productivity for growing eastern white pine on this soil is very high. The steep slopes limit the use of planting and harvesting equipment and create a safety hazard to equipment operators. Because of very low available water capacity, this soil tends to be droughty, which in turn results in a severe seedling mortality rate. Selecting species tolerant of dry soil conditions and planting while the soil is moist will promote seedling survival.

The main limitation if this soil is used as a site for dwellings is slope. A better suited site on less sloping soils should be considered. Extensive land grading and shaping will probably be necessary on this unit. Designing the dwelling to conform to the natural terrain is one way to compensate for the slope limitation.

The main limitation if this soil is used as a site for local roads and streets is slope. Constructing roads along the contour will reduce the slope limitation.

The main limitations if this soil is used as a site for septic tank absorption fields are slope and the poor filtering ability of the soil. Because of very rapid permeability, there is a possibility of ground water contamination. A better suited site should be considered for this use.

The main limitations if this soil is used as a site for shallow excavations are steep slopes and the tendency of the soils to cave in. Where possible, utilities should be routed around steep areas. Maneuvering machinery on these slopes will be difficult

and risky. The banks of the excavation should be mechanically supported to avoid the possibility of soil falling on workers or other victims.

The capability subclass is 7s.

Crk—Cook mucky loamy fine sand

This very deep, nearly level, and very poorly drained soil occurs in depressions and along streams on glacial till lowlands and glacial lake beaches. Slope ranges from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 7 inches, very dark grayish brown mucky loamy fine sand

Substratum:
7 to 9 inches, grayish brown gravelly sand with common mottles
9 to 18 inches, light brownish gray gravelly sand with common mottles
18 to 23 inches grayish brown gravelly sand with common mottles
23 to 72 inches, light brownish gray gravelly fine sandy loam with many mottles

Included with this soil in mapping are about 5 percent somewhat poorly drained Coveytown soils on slightly higher positions. Small areas of very poorly drained Markey and Wonsqueak soils are included in depressions where thick organic deposits occur on the surface. Small areas of very poorly drained Runeberg and Sabattis soils are intermixed in the unit where the sandy mantle is thin or absent. Also included are areas that are very stony. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid in the surface, rapid in the upper part of the substratum, and moderately slow in the lower part of the substratum
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: at the surface to 6 inches below the surface at some time from November through June
Root zone: 12 inches deep or less
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as brushland or woodland.

This soil is poorly suited to growing cultivated crops and hay. The seasonal high water table will delay planting in the spring and harvesting in the fall without adequate drainage measures. Surface and subsurface drainage can significantly increase productivity by improving farm operations and field conditions. However, good outlets may be difficult to establish without endangering important wetland habitat. Conservation tillage systems, crop rotation, maintenance of existing drainageways, and the use of cover crops are good management practices.

This soil is poorly suited to pasture. The seasonal high water table causes wetness during most of the year. Heavily grazed and traveled parts of the pasture will become muddy with stunted plant growth. Key forage species must be tolerant to wet conditions. Deferred grazing, rotational grazing, proper stocking rates, maintenance of existing drainageways and yearly mowing are good pasture management practices on this soil.

The potential productivity for growing eastern white pine on this soil is high. Because of the seasonal high water table and restricted root growth, seedling

mortality and windthrow hazard will be severe for most of this unit. Maneuvering timber harvesting equipment on this soil may be difficult during wet periods.

The main limitation if this soil is used as a site for dwellings is the depth to seasonal high water table. A better suited site should be considered such as a well drained map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this map unit is used as a site for local roads and streets is the depth to seasonal high water table. Roads should be constructed on raised coarse grained fill material and adequate drainage should be installed.

The main limitations if this map unit is used as a site for septic tank absorption fields are the seasonal high water table and the moderately slow permeability in the lower part of the substratum. A better suited site should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this map unit is used as a site for shallow excavations is the depth to seasonal high water table. Digging operations may have to be restricted to drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area will also likely occur because of wetness.

The capability subclass is 4w.

Crr—Cornish silt loam

This very deep, nearly level, and somewhat poorly drained soil is on low areas of alluvial plains that occasionally flood for brief periods. Slopes range from 0 to 2 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, very dark grayish brown silt loam

Subsoil:
8 to 22 inches, brown silt loam with many mottles
22 to 28 inches, light brownish gray silt loam with many mottles

Substratum:
28 to 56 inches, light brownish gray silt loam with many mottles
56 to 66 inches, bluish gray silt loam
66 to 72 inches, dark gray very fine sandy loam

Included with this soil in mapping are about 5 percent very poorly drained Medomak soils in abandoned stream channels and depressions, and moderately well drained Lovewell soils on slightly higher positions within the flood plain. About 5 percent of this map unit includes the Fluvaquents-Udifluvents complex in areas where more frequent flooding occurs. Also included are soils similar to the somewhat poorly drained Wainola and moderately well drained Croghan soils in slightly higher positions where flooding rarely occurs. Small areas of similar soil having a shallow sandy or gravelly substratum are also included. A few small areas of gravelly soils are included near high velocity streams. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate throughout
Available water capacity (average for 40-inch profile): high

Depth to seasonal high water table: 12 to 24 inches below the surface at some time from November through May
Root zone: mainly 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in corn and hay. Only drained areas of this soil qualify as prime farmland.

This soil is moderately suited to growing cultivated crops and hay because of the depth to seasonal high water table and flooding potential during the growing season. Very moist soil conditions can delay planting in the spring or harvest in the fall. Surface and subsurface drainage may improve the efficiency of farm operations and increase crop yield. However, because this soil is on a low position within the landscape, effective drainage may be difficult. Conservation tillage systems, crop rotation, and maintenance of existing drainageways are good management practices.

This soil is moderately suited to pasture. Because of the seasonal high water table, the moist soil surface may be too soft during the spring to support normal livestock traffic. Therefore, proper stocking rates during periods of high rainfall will help conserve key forage species. Rotational grazing, maintenance of existing drainageways, and yearly mowing are also good management practices.

The potential productivity for growing eastern white pine on this soil is high. Since the ground is typically soft during wet periods on this somewhat poorly drained soil, timber harvesting equipment will likely be more effective during the summer or during frozen ground conditions. Because the depth to seasonal high water table restricts maximum root growth, seedling mortality and windthrow can be a moderate management concern. Selecting species tolerant to wet soil conditions and avoiding excessive thinning will help increase seedling survival and minimize windthrow.

The main limitations if this map unit is used as a site for dwellings are the depth to seasonal high water table and the potential for seasonal flooding. A better suited site should be considered such as on a higher nearby landscape position.

The main limitations if this map unit is used as a site for local roads and streets are flooding and frost action. If possible, roads should be routed around this flood plain area. Constructing roads on raised coarse grained fill material and providing adequate drainage will help reduce damage from frost action. In areas near high gradient streams, riprap can be used to protect road grades from erosion and undermining.

The main limitations if this map unit is used as a site for septic tank absorption fields are the seasonal high water table and flooding. A better suited site should be considered for this use. If this soil is used, contamination of surface and ground water can occur.

The main limitations if this map unit is used as a site for shallow excavation are the seasonal high water table and the tendency of the soil to cave in. Digging operations will be less difficult during drier periods of the year. Sloughing of soil will likely occur because of wetness. The banks of the excavation can be mechanically supported to avoid soil caving in on workers or other possible victims.

The capability subclass is 3w.

Cs—Covert loamy sand

This very deep, nearly level, and moderately well drained soil is on sand plains, terraces, deltas, and lake plains. Slopes range from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 3 inches, black moderately decomposed twigs and needles
3 to 6 inches, very dark gray loamy sand

Subsoil:
6 to 8 inches, dark gray loamy sand
8 to 19 inches, dark brown loamy sand
19 to 30 inches, brown loamy sand
30 to 37 inches, strong brown loamy sand

Substratum:
37 to 52 inches, brown sand with common mottles
52 to 72 inches, grayish brown sand with common mottles

Included with this soil in mapping are about 5 percent Grattan soils on slightly convex areas. About 5 percent of this unit consists of somewhat poorly drained Pipestone soils and poorly drained Gougeville soils along drainageways and in depressions. Small areas of Covertfalls soils are included where loamy material is within 40 inches deep. Also included in mapping are small areas of soils similar to Flackville and Shaker soils where silt and clay deposits are less than 40 inches deep. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: 24 to 42 inches below the surface at some time from November through April
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as hay or woodland. Some areas are used as cropland or pasture.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table may delay planting and harvest operations during periods of heavy precipitation. Surface and subsurface drainage systems will help improve efficiency of farm operations and increase crop yield. Because of low available water holding capacity, this sandy soil may be droughty during dry periods. Conservation tillage systems, crop rotation, establishing a cover crop, and maintenance of waterways are good management practices.

This soil is well suited to pasture. Soil wetness during the early spring can retard forage growth, especially where inclusions of Pipestone and Gougeville soils occur. Droughtiness during the late summer may also diminish the forage density on this soil. Avoiding excessive grazing will help sustain desirable pasture plant species. Rotational grazing, proper stocking rates, and yearly mowing are good management practices.

The potential productivity for growing eastern white pine on this soil is high. Seedling mortality can be a management problem with some tree species because of low water holding capacity. Seedling survival will improve if drought resistant tree species are planted during moist soil conditions.

The main limitation if this soil is used as a site for dwellings with basements is the seasonal high water table. Inclusions or nearby units of Grattan soils are better suited for this use. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is the seasonal high water table. Adequate surface and subsurface drainage in critical areas will decrease wetness problems.

The main limitations if this soil is used as a site for septic tank absorption fields are the poor filtering ability and the seasonal high water table. If this soil is used, higher spots within the map unit would likely perform better for this use. A specially designed system should be considered. Because of the rapid permeability of this soil, there is a possibility of ground water contamination.

The main limitations if this soil is used as a site for shallow excavations are the tendency of cutbanks to cave in and the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Mechanically supporting the banks of the excavation will help prevent the possibility of soil caving in on workers or unsuspecting children.

The capability subclass is 2w.

CtsA—Covertfalls loamy fine sand, 0 to 3 percent slopes

This soil is very deep, nearly level and moderately well drained. It is on sand plains and terraces.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
1 inch thick layer of leaves and twigs
0 to 8 inches, very dark brown loamy fine sand

Subsoil:
8 to 10 inches, dark reddish brown loamy fine sand
10 to 20 inches, brown loamy fine sand
20 to 26 inches, brown loamy fine sand with common mottles

Substratum:
26 to 41 inches, brown cobbly loam with many mottles
41 to 72 inches, grayish brown cobbly loam with few mottles

Included with this soil in mapping are about 5 percent Grattan and Covert soils on slightly convex positions where depth of sand is more than 40 inches. About 5 percent of this map unit consists of somewhat poorly drained Northway and Pipestone soils along drainageways and in slight depressions. Also included in this map unit are similar soils having substrata dominated by silt or clay, or with a very gravelly surface and subsoil. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the surface and subsoil, and moderate or moderately slow in the substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: 18 to 30 inches below the surface at some time between November and May
Root zone: dominantly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas are forested or are idle. Some areas are also used for growing hay. This soil meets the requirements of prime farmland in Clinton County.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table may delay planting in early spring or other periods following heavy rain. Surface and subsurface drainage systems installed particularly in somewhat poorly drained inclusions will help to improve efficiency of farm operations and increase crop yield. Conservation tillage systems, crop rotation, and maintenance of waterways are good management practices.

This soil is well suited to pasture. Soil wetness during the early spring may retard plant growth especially in areas of somewhat poorly drained inclusions. Because of the sandy surface and subsoil, droughtiness during late summer may also diminish the potential forage density on this soil. Overgrazing should therefore be avoided to encourage desirable plant species. Rotational grazing, proper stocking rates and yearly mowing are good management practices.

The potential productivity for growing eastern white pine on this soil is very high. Seedling mortality can be a management concern with some tree species because of sandy surface texture and limited available moisture during summer months.

The main limitation if this soil is used as a site for dwellings is the depth to seasonal high water table. A better suited site should be considered such as a higher area in the map unit or on a nearby landform. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate wetness. Diversion ditches can also help control wetness by carrying surface water away from the dwelling.

The main limitations if this soil is used as a site for local roads and streets are frost action and the depth to seasonal high water table. Construction design for new roads can alleviate these concerns by specifying coarser grained subgrade or base material. Adequate surface and subsurface drainage in critical areas will also decrease the potential for frost action and wetness.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, the soil's poor ability to filter effluent properly, and the moderately slow permeability in the substratum. A better suited site should be considered for this use. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the subsoil's tendency to cave in. Digging operations may be limited to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavation may also occur because of wetness. The banks of the excavation should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 2w.

CtsB—Covertfalls loamy fine sand, 3 to 8 percent slopes

This very deep, gently sloping, and moderately well drained soil is on sand plains and terraces.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
1 inch thick layer of leaves and twigs
0 to 8 inches, very dark brown loamy fine sand

Subsoil:
8 to 10 inches, dark reddish brown loamy fine sand
10 to 20 inches, brown loamy fine sand
20 to 26 inches, brown loamy fine sand with common mottles

Substratum:
26 to 41 inches, brown cobbly loam with many mottles
41 to 72 inches, grayish brown cobbly loam with few mottles

Included with this soil in mapping are about 5 percent Grattan and Covert soils on more convex positions where depth of sand is more than 40 inches. About 5 percent of this map unit includes somewhat poorly drained Northway and Pipestone soils along drainageways and in slight depressions. Also included in this map unit are similar soils having substrata dominated by silt or clay, or with a very gravelly surface and subsoil. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the surface and subsoil, and moderate or moderately slow in the substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: 18 to 30 inches below the surface at some time between November and May
Root zone: dominantly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas are forested or are idle. Some areas are also used for growing hay. This soil meets the requirements of prime farmland in Clinton County.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table may delay planting in early spring or other periods following heavy rain. Surface and subsurface drainage systems installed particularly in somewhat poorly drained inclusions will help to improve efficiency of farm operations and increase crop yield. Conservation tillage systems, crop rotation, and maintenance of waterways are good management practices.

This soil is well suited to pasture. Soil wetness during the early spring may retard plant growth especially in areas of somewhat poorly drained inclusions. Because of the sandy surface and subsoil, droughtiness during late summer may also diminish the potential forage density on this soil. Overgrazing should therefore be avoided to encourage desirable plant species. Rotational grazing, proper stocking rates, and yearly mowing are good management practices.

The potential productivity for growing eastern white pine on this soil is very high. Seedling mortality can be a management concern with some tree species because of a sandy surface texture and limited available moisture during summer months.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area in the map unit or on a nearby landform. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate wetness. Diversion ditches can also help control wetness by carrying surface water away from the dwelling.

The main limitations if this soil is used as a site for local roads and streets are frost action and the seasonal high water table. Construction design for new roads can alleviate these concerns by specifying thicker application of coarse grained subgrade or base material. Adequate surface and subsurface drainage in critical areas will also decrease the potential for frost action and wetness.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, the soil's poor ability to filter effluent properly, and the moderately slow permeability in the substratum. A better suited site should be considered for this use. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the subsoil's tendency to cave in. Digging operations may be limited to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness. The banks of the excavation should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 2w.

CttB—Covertfalls gravelly loamy fine sand, 3 to 8 percent slopes

This very deep, gently sloping, and moderately well drained soil is on gravelly ridges and terraces.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
1 inch thick layer of leaves and twigs
0 to 8 inches, very dark brown gravelly loamy fine sand

Subsoil:
8 to 10 inches, dark reddish brown loamy fine sand
10 to 20 inches, brown loamy fine sand
20 to 26 inches, brown loamy fine sand with common mottles

Substratum:
26 to 41 inches, brown cobbly loam with many mottles
41 to 72 inches, grayish brown cobbly loam with few mottles

Included with this soil in mapping are about 5 percent Waddington and Grattan soils on more convex positions where depth of sand or gravel deposits are more than 40 inches. About 5 percent of this map unit includes somewhat poorly drained Northway and Pipestone soils along drainageways and in slight depressions. About 5 percent of this unit includes Amenia soils where the profile is dominantly loamy till without the sand and gravel mantle. Also included in this map unit are similar soils having substrata dominated by silt or clay or with a very gravelly subsoil. In some places, very gravelly loamy sand and cobbly loamy sand surface layers were observed. Inclusions make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the surface and subsoil, and moderate or moderately slow in the substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: 18 to 30 inches below the surface at some time between November and May
Root zone: dominantly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas are used for growing hay. Some areas are reverting to brush. This soil meets the requirements of prime farmland in Clinton County.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table may delay planting in early spring or other periods following heavy rain. Surface and subsurface drainage systems installed particularly in somewhat poorly drained inclusions will help to improve efficiency of farm operations and increase crop

yield. Conservation tillage systems, crop rotation, and maintenance of waterways are good management practices.

This soil is well suited to pasture. Soil wetness during the early spring may retard plant growth especially in areas of somewhat poorly drained inclusions. Because of the sandy surface and subsoil, droughtiness during late summer may also diminish the potential forage density on this soil. Overgrazing should be avoided to encourage desirable plant species. Rotational grazing, proper stocking rates, and yearly mowing are good management practices.

The potential productivity for growing eastern white pine on this soil is very high. Seedling mortality can be a management concern with some tree species because of a sandy surface texture and limited available moisture during summer months.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area in the map unit or on a nearby landform. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate wetness. Diversion ditches can also help control wetness by carrying surface water away from the dwelling.

The main limitations if this soil is used as a site for local roads and streets are frost action and the seasonal high water table. Construction design for new roads can alleviate these limits by specifying thicker application of coarse grained subgrade or base material. Adequate surface and subsurface drainage in critical areas will also decrease the potential for frost action and wetness.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, the soil's poor ability to filter effluent properly, and the moderately slow permeability in the substratum. A better suited site should be considered for this use. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the subsoil's tendency to cave in. Digging operations may be limited to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness. The banks of the excavation should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 2w.

CvA—Coveytown loamy sand, 0 to 3 percent slopes

This very deep, nearly level, and somewhat poorly drained soil occurs at the base of ridges and in concave areas of glacial till deposits that have been modified by both wave action and deposition of sands.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, very dark grayish brown loamy sand

Subsoil:
8 to 10 inches, yellowish brown and very dark grayish brown sand
10 to 17 inches, light yellowish brown sand with common mottles
17 to 28 inches, light brownish gray and pale brown sand with common mottles

Substratum:
28 to 48 inches, dark grayish brown gravelly fine sandy loam with many mottles
48 to 72 inches, grayish brown gravelly sandy loam with common mottles

Figure 13. —An area of near-shore glacial lake deposits. In the foreground is somewhat poorly drained Coveytown loamy sand which has a loamy substratum within 40 inches of the surface. In the center of the landscape is moderately well drained Fahey soils having sand and gravel deposits overlying a deeper loamy substratum. Colosse - Trout River complex occurs on the higher wooded area in the background.

Included with this soil in mapping are about 5 percent very poorly drained Cook and Runeberg soils in lower areas of depressions. About 5 percent moderately well drained Occur and Fahey soils are included on slightly more convex areas of the landscape (fig. 13). About 5 percent somewhat poorly drained Malone and Peasleeville soils are in areas where the sandy mantle is thin or absent. Also included are small areas of somewhat poorly drained Sciota and Wainola soils in places where the sandy mantle is thicker than 40 inches, and small areas of similar soil having a clayey substratum. In some areas the surface texture is loamy fine sand or cobbly loamy fine sand. Included areas make up about 25 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid or rapid in the surface and subsoil, and moderate or moderately slow in the substratum
Available water capacity (average for 40-inch profile): very low to low
Depth to seasonal high water table: 12 to 18 inches below the surface at some time during November through May
Root zone: mainly to 16 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as pasture or for growing hay. Some areas are planted to corn.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring. Surface and subsurface drainage systems can help improve efficiency of farm operations and also increase crop yield. Conservation tillage systems, crop rotation and maintenance of drainageways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table can cause significant wetness problems in barnyards and heavily traveled areas of the pasture especially in the spring. Forage plants may show stunted growth during the early part of the growing season as a result of wetness. Deferred grazing, rotational grazing, proper stocking rates, maintaining drainage structures, and yearly mowing are good management practices.

The potential productivity for growing red maple on this soil is moderate. Because of the seasonal high water table, soft ground conditions may limit the use of heavy harvesting equipment to drier periods of the year. Seedling mortality and windthrow are considered moderate management concerns on this soil because of restricted root growth especially in areas of the poorly drained inclusions.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area within the map unit or on a nearby landform. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The seasonal high water table and frost action are moderate limitations if this soil is used as a site for local roads and streets. Roads constructed on raised coarse-grained fill material with adequate drainage installed will generally require less maintenance costs in the long-term.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, the moderately slow permeability in the substratum, and the soil's poor ability to filter effluent properly in the upper part of the soil. A better suited site should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the soil's tendency to cave in. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness. The banks of the excavation should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 3w.

CvB—Coveytown loamy sand, 3 to 8 percent slopes

This very deep, gently sloping, and somewhat poorly drained soil occurs at the base of ridges and in concave areas of glacial till deposits that have been modified by both wave action and deposition of sands.

The typical sequence, depth and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, very dark grayish brown loamy sand

Subsoil:
8 to 10 inches, yellowish brown and very dark grayish brown sand
10 to 17 inches, light yellowish brown sand with common mottles
17 to 28 inches, light brownish gray and pale brown sand with common mottles

Substratum:
28 to 48 inches, dark grayish brown gravelly fine sandy loam with many mottles
48 to 72 inches, grayish brown gravelly sandy loam with common mottles

Included with this soil in mapping are about 5 percent very poorly drained Cook and Runeberg soils in lower areas of depressions. About 5 percent moderately well drained Occur and Fahey soils are included on more convex areas of the landscape. About 5 percent somewhat poorly drained Malone and Peasleeville soils occur in areas where the sandy mantle is thin or absent. Also included are small areas of somewhat poorly drained Sciota and Wainola soils in places where the sandy mantle is thicker than 40 inches, and small areas of similar soil having a clayey substratum. In some areas the surface texture is loamy fine sand and cobbly loamy fine sand. Included areas make up about 25 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid or rapid in the surface and subsoil, and moderate or moderately slow in the substratum
Available water capacity (average for 40-inch profile): very low to low
Depth to seasonal high water table: 12 to 18 inches below the surface at some time during November through May
Root zone: mainly to 16 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in pasture or hayland. Some areas are in cropland.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring. Surface and subsurface drainage systems can help improve efficiency of farm operations and also increase crop yield. Conservation tillage systems, crop rotation, and maintenance of drainageways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table can cause significant wetness problems in barnyards and heavily traveled areas of the pasture especially in the spring. Forage plants may show stunted growth during the early part of the growing season as a result of wetness. Deferred grazing, rotational grazing, proper stocking rates, maintaining drainageways, and yearly mowing are good management practices.

The potential productivity for growing red maple on this soil is moderate. Because of the seasonal high water table, the soft ground conditions may limit the use of heavy harvesting equipment to drier periods. Seedling mortality and windthrow are also moderate management concerns on this soil because of restricted root growth especially in areas of poorly drained inclusions.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area in the map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

Moderate limitations of this soil for local roads and streets are the seasonal high water table and frost action. Roads constructed on raised coarse-grained fill material with adequate drainage installed will reduce the frost action.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, the moderately slow permeability in the substratum and the soil's poor ability to filter effluent properly. A better suited site should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the tendency of the soil to cave in. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness. The banks of the excavation should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 3w.

CwB—Coveytown loamy sand, gently sloping, very stony

This very deep and somewhat poorly drained soil occurs at the base of ridges and in concave areas of glacial till deposits that have been modified by both wave action and deposition of sands. Large stones cover up to 3 percent of the surface. Slopes range from 0 to 8 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, very dark grayish brown loamy sand

Subsoil:
8 to 10 inches, yellowish brown and very dark grayish brown sand
10 to 17 inches, light yellowish brown sand with common mottles
17 to 28 inches, light brownish gray and pale brown sand with common mottles

Substratum:
28 to 48 inches, dark grayish brown gravelly fine sandy loam with many mottles
48 to 72 inches, grayish brown gravelly sandy loam with common mottles

Included with this soil in mapping are about 5 percent very poorly drained Cook and Runeberg soils in the lower areas of depressions. About 5 percent moderately well drained Occur and Fahey soils are included on more convex areas of the landscape. About 5 percent somewhat poorly drained Malone and Peasleeville soils occur in areas where the sandy mantle is thin or absent. Also included are small areas of somewhat poorly drained Sciota and Wainola soils in places where the sandy mantle is thicker than 40 inches. Small areas of similar soil having a clayey substratum and small areas of non-stony soils are also included. In some areas the surface texture is loamy fine sand and cobbly loamy fine sand. Included area make up about 25 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid or rapid in the surface and subsoil, and moderate or moderately slow in the substratum
Available water capacity (average for 40-inch profile): very low to low
Depth to seasonal high water table: 12 to 18 inches below the surface at some time during November through May
Root zone: mainly to 16 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland and pasture.

This soil is poorly suited to growing cultivated crops and hay. Because of many large surface stones, farm equipment use is seriously limited and subject to excessive wear and tear. The seasonal high water table can delay planting in the spring. Stone clearing, conservation tillage systems, crop rotation and maintenance of waterways are good management practices on this soil.

This soil is poorly suited to pasture. Because of many large surface stones, good pasture maintenance such as yearly mowing is difficult to achieve unless stone clearing takes place. The seasonal high water table can cause significant wetness problems in barnyards and heavily traveled areas of the pasture especially in the spring. Forage plant growth may be stunted during the early part of the growing season as a result of wetness. Stone clearing, rotational grazing, proper stocking rates, maintaining drainageways, and yearly mowing are good management practices.

The potential productivity for growing red maple on this soil is moderate. Because of the seasonal high water table, soft ground conditions may limit the use of heavy harvesting equipment to drier periods. Seedling mortality and windthrow are also moderate management concerns on this soil as a result of restricted root growth especially in areas of poorly drained inclusions.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area in the map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying water away from the dwelling.

Moderate limitations of this soil for local roads and streets are the seasonal high water table and frost action. Roads constructed on raised coarse-grained fill material with adequate drainage installed will generally require less maintenance costs in the long-term.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, the moderately slow permeability in the substratum and the soil's poor ability to filter effluent properly in the upper part of the soil. A better suited site should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the tendency of the soil to cave in. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness. The banks of the excavation should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 6s.

CxA—Croghan loamy fine sand, 0 to 3 percent slopes

This very deep, nearly level, and moderately well drained soil formed in low lime, sandy deposits on outwash plains, terraces, deltas, and lake plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
1 inch thick layer of roots and sphagnum moss
0 to 1 inch, black moderately decomposed organic material
1 to 3 inches, black loamy fine sand

Subsoil:
3 to 9 inches, pinkish gray fine sand
9 to 11 inches, dark reddish brown fine sand
11 to 16 inches, reddish brown and dark reddish brown fine sand
16 to 33 inches, brown fine sand with common mottles

Substratum:
33 to 72 inches, pinkish gray fine sand with many mottles

Included with this soil in mapping are about 5 percent Adams soils on higher areas of the unit. About 5 percent of this unit are somewhat poorly drained Wainola and poorly drained Deinache soils along drainageways and in slight depressions. Included in mapping are small areas of Flackville and Swanton soils where silt and clay deposits are within 40 inches of the surface. Also included are small areas of Occur soils where loamy material is within 40 inches of the surface. In some areas the surface texture is loamy sand. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the mineral surface and subsurface, and very rapid in the subsoil and substratum
Available water capacity (average for 40-inch profile): very low to low
Depth to seasonal high water table: 18 to 24 inches deep at some time from November through May
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland or for growing hay. Some areas are used pasture or for growing crops.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table may delay farming operations following periods of heavy precipitation. Surface and subsurface drainage systems will help to improve the efficiency of farm operations and increase crop yield especially in areas of somewhat poorly drained inclusions. Because of the very low available water capacity, this sandy soil may be droughty during part of the growing season. Applications of organic matter will help improve the water holding capacity of this soil. Conservation tillage systems, crop rotation, establishing a cover crop, maintenance of waterways, and the addition of manure and other supplements are good management practices.

This soil is well suited to pasture. Soil wetness during the early part of the growing season may retard forage growth, especially in included areas of Wainola and Deinache soils. Droughtiness during the late summer may also diminish the potential forage on this soil. Excessive grazing should be avoided so as to sustain desirable pasture plant species. Rotational grazing, proper stocking rates, and yearly mowing are good management practices.

The potential productivity for growing eastern white pine on this soil is high. Seedling mortality can be a management problem with some tree species on this soil because of very low available water capacity. Drought-tolerant seedlings that are planted during moist soil conditions promotes seedling survival.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. Nearby units of Adams soils are better suited for this use. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitations if this soil is used as a site for local roads and streets are a moderate potential for frost action and the seasonal high water table. Providing a coarse-grained subgrade will alleviate frost action. Adequate surface and subsurface drainage in critical areas will also decrease the potential for frost action and seasonal wetness.

The main limitations if this soil is used as a site for septic tank absorption fields are the soil's poor filtering ability and the seasonal high water table. If this soil is used, higher spots within the map unit would likely perform better for this use. Conventional septic system designs may perform poorly on this soil. Alternative designs that

augment the filtering capacity of this system should be considered. Because of very rapid permeability, there is a possibility of ground water contamination by septic effluent.

The main limitations if this soil is used as a site for shallow excavations are the tendency for cutbanks to cave in and the seasonal high water table. Digging operations may be restricted after periods of heavy rainfall unless drainage is installed. Mechanically supporting the banks of the excavation will help prevent the possibility of soil caving in on workers or other victims.

The capability subclass is 2w.

CxB—Croghan loamy fine sand, 3 to 8 percent slopes

This very deep, gently sloping, and moderately well drained soil formed in low lime, sandy deposits on outwash plains, terraces, deltas, and lake plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
1 inch thick layer of roots and sphagnum moss
0 to 1 inch, black moderately decomposed organic material
1 to 3 inches, black loamy fine sand

Subsoil:
3 to 9 inches, pinkish gray fine sand
9 to 11 inches, dark reddish brown fine sand
11 to 16 inches, reddish brown and dark reddish brown fine sand
16 to 33 inches, brown fine sand with common mottles

Substratum:
33 to 72 inches, pinkish gray fine sand with many mottles

Included with this soil in mapping are about 5 percent Adams soils on higher areas of the unit. About 5 percent of this unit are somewhat poorly drained Wainola and poorly drained Deinache soils along drainageways and in slight depressions. Included in mapping are small areas of Flackville and Swanton soils where silt and clay deposits are within 40 inches of the surface. Also included are small areas of Occur soils where loamy till material is within 40 inches of the surface. In some areas the surface texture is loamy sand. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the mineral surface and subsurface, and very rapid in the subsoil and substratum
Available water capacity (average for 40-inch profile): very low to low
Depth to seasonal high water table: 18 to 24 inches deep at some time from November through May
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland or for growing hay. Some areas are used as pasture or for growing crops.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table may delay farming operations following periods of heavy precipitation. Surface and subsurface drainage systems will help to improve the efficiency of farm operations and increase crop yield especially in areas of somewhat poorly drained

inclusions. Because of the very low available water capacity, this sandy soil may be droughty during part of the growing season. Applications of organic matter will help improve the water holding capacity of this soil. Conservation tillage systems, crop rotation, establishing a cover crop, maintenance of waterways, and the addition of manure and other supplements are good management practices.

This soil is well suited to pasture. Soil wetness during the early part of the growing season may retard forage growth, especially in included areas of Wainola and Deinache soils. Droughtiness during the late summer may also diminish the potential forage on this soil. Excessive grazing should be avoided so as to sustain desirable pasture plant species. Rotational grazing, proper stocking rates, and yearly mowing are good management practices.

The potential productivity for growing eastern white pine on this soil is high. Seedling mortality can be a management problem with some tree species on this soil because of very low available water capacity. Drought-tolerant seedlings that are planted during moist soil conditions will promote seedling survival.

The main limitation if this soil is used as a site for dwellings with basements is the seasonal high water table. Nearby units of Adams soils are better suited to this use. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitations if this soil is used as a site for local roads and streets are a moderate potential for frost action and the seasonal high water table. Road designs can specify using a more coarse-grained subgrade material to alleviate frost action. Adequate surface and subsurface drainage in critical areas will also decrease the potential for frost action and seasonal wetness.

The main limitations if this soil is used as a site for septic tank absorption fields are the soil's poor filtering ability and the seasonal high water table. If this soil is used, higher spots within the map unit would likely perform better. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered. Because of very rapid permeability, there is a possibility of ground water contamination by septic effluent.

The main limitations if this soil is used as a site for shallow excavations are the tendency for cutbanks to cave in and the seasonal high water table. Digging operations may be restricted after periods of heavy rainfall unless drainage is installed. Mechanically supporting the banks of the excavation will help prevent the possibility of soil caving in on workers or other victims.

The capability subclass is 2w.

DeA—Deerfield fine sand, 0 to 3 percent slopes

This very deep, nearly level, and moderately well drained soil occurs on sandy outwash plains and terraces.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
2 inches thick layer of pine needles
0 to 1 inch, very dark grayish brown fine sand

Subsurface layer:
1 to 6 inches, brown fine sand

Subsoil:
6 to 17 inches, yellowish brown fine sand
17 to 31 inches, brown fine sand with common mottles

Substratum:
31 to 37 inches, brown fine sand with few mottles
37 to 72 inches, dark gray fine sand

Included with this soil in mapping are about 10 percent somewhat poorly drained Junius and Pipestone soils in slight depressions and shallow drainageways. About 5 percent moderately well drained Covert soils with a more reddish brown subsoil are intermixed in the unit. Small areas of poorly drained Gougeville soils are in swales and shallow drainageways. Small areas of somewhat poorly drained Northway soils and moderately well drained Covertfalls soils are included where sands overlie loamy deposits. In some areas the surface texture is loamy fine sand or loamy sand. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the mineral surface and subsoil, and very rapid in the substratum
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: 18 to 36 inches deep at some time during December through April
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as pasture or for growing hay.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table can delay farm operations in the spring or after heavy rainfall. Surface and subsurface drainage systems installed especially in somewhat poorly drained inclusions will help to improve the efficiency of farm operations and increase crop yield. Because of low available water capacity, this soil may be droughty during mid-summer. Conservation tillage systems, crop rotation, and maintenance of waterways are good management practices.

This soil is well suited to pasture. The seasonal high water table can cause some wetness problems in barnyards and heavily traveled areas of the pasture especially in the spring. Forage plants may show stunted growth during the early part of the growing season as a result of wetness. Rotational grazing, proper stocking rates, and yearly mowing are good management practices.

The potential productivity for growing eastern white pine on this soil is high. Seedling mortality can be a management concern because of the seasonal high water table in the spring and droughtiness during dry summers. Survival rates of seedlings will be highest when planted during moist soil conditions.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area nearby. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitations if this soil is used as a site for local roads and streets are frost action and the seasonal high water table. Construction plans should call for providing a coarser grained subgrade material. Adequate surface and subsurface drainage in critical areas will also decrease the potential for frost action and wetness.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the soil's poor ability to filter effluent properly. A better suited site should be considered for this use. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered. Because of very rapid permeability, there is a possibility of ground water contamination by septic effluent.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the tendency for the soil to cave in. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness. The banks of the excavation should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 2w.

DeB—Deerfield fine sand, 3 to 8 percent slopes

This soil is very deep, gently sloping and moderately well drained. It occurs on sandy outwash plains and terraces.

The typical sequence, depth and composition of the layers of this soil are as follows—

Surface layer:
2 inches thick layer of pine needles
0 to 1 inch, very dark grayish brown fine sand

Subsurface layer:
1 to 6 inches, brown fine sand

Subsoil:
6 to 17 inches, yellowish brown fine sand
17 to 31 inches, brown fine sand with common mottles

Substratum:
31 to 37 inches, brown fine sand with few mottles
37 to 72 inches, dark gray fine sand

Included with this soil in mapping are about 5 percent somewhat poorly drained Junius and Pipestone soils in slight depressions and shallow drainageways. About 5 percent moderately well drained Covert soils with a more reddish brown subsoil are intermixed in the unit. Small areas of poorly drained Gougeville soils in swales and shallow drainageways. Small areas of somewhat poorly drained Northway soils and moderately well drained Covertfalls soils are included where sands overlie loamy deposits. Also included are small areas of Plainfield soils on slightly convex or higher positions. In some areas the surface texture is loamy fine sand or loamy sand. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the mineral surface and subsoil, and very rapid in the substratum
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: 18 to 36 inches deep at some time during December through April
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as pasture or for growing hay.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table can delay farm operations in the spring or after heavy rainfall. Surface and subsurface drainage systems installed especially in somewhat poorly drained inclusions will help to improve the efficiency of farm operations and increase crop yield. Because of low available water capacity, this soil may be droughty during mid-summer. Significant erosion may occur on long slopes planted to row crops.

Conservation tillage systems, crop rotation and maintenance of waterways are good management practices.

This soil is well suited to pasture. The seasonal high water table can cause some wetness problems in barn yards and heavily traveled areas of the pasture especially in the spring. Erosion of topsoil can occur under these conditions. Forage plants may show stunted growth during the early part of the growing season as a result of wetness. Rotational grazing, proper stocking rates, and yearly mowing are good management practices.

The potential productivity for growing eastern white pine on this soil is high. Seedling mortality can be a management concern because of the seasonal high water table in the spring and droughtiness during dry summers. Survival rates of seedlings will be highest when planted during moist soil conditions.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area in the map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitations if this soil is used as a site for local roads and streets are frost action and the seasonal high water table. Construction plans should call for providing a coarse-grained subgrade material. Adequate surface and subsurface drainage in critical areas will also decrease the potential for frost action and wetness.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the soil's poor ability to filter effluent properly. A better suited site should be considered for this use. If this soil is used, higher spots within the map unit would likely perform better for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the tendency of the soil to cave in. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness. The banks of the excavation should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 2w.

Df—Deinache fine sand

This very deep, nearly level, and poorly drained soil occurs in basin-like areas on sandy lake plains. Slopes range from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark brown fine sand

Substratum:
9 to 19 inches, grayish brown fine sand with common mottles
19 to 35 inches, light brownish gray fine sand with common mottles
35 to 44 inches, dark gray loamy fine sand with few mottles
44 to 48 inches, very dark gray loamy very fine sand with few mottles
48 to 64 inches, dark gray very fine sandy loam
64 to 72 inches, dark gray silt loam

Included with this soil in mapping are about 5 percent very poorly drained Pinconning soils in areas having clayey substrata. About 5 percent of this unit are somewhat poorly drained Sciota and Wainola soils on slightly higher positions. In

some landscape depressions, very poorly drained Markey and Wonsqueak soils are included where thicker organic deposits have accumulated. Also included are soils similar to Deinache soils but very poorly drained, and sandy soils with loamy substrata similar to Cook and Coveytown soils. In some areas, the surface texture is loamy fine sand or fine sandy loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the solum and upper substratum, and moderate or moderately rapid in the lower substratum
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: at the surface to 12 inches deep at some time during November through May
Root zone: dominantly in the upper 12 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in brush or woodland. Some areas are being used to grow corn or hay.

This soil is poorly suited to growing cultivated crops and hay because of the seasonal high water table. The surface is saturated by water during the early part of the growing season. Drainage can be expensive to install and maintain, since this soil typically occupies one of the lowest positions on the landscape. Outlets may be very difficult to establish without draining important wetland. Applying a conservation tillage systems, growing cover crops, and maintaining existing drainageways are good practices on this soil.

This soil is poorly suited to pasture. The seasonal high water table is near the surface during part of the grazing season. Drier areas should be considered for this use. Very poorly drained inclusions will not support good forage for livestock. Ground conditions are typically too soft for livestock traffic during the spring and may cause serious erosion. Deferred grazing, rotational grazing, and proper stocking rates are good management practices on this soil.

The potential productivity for growing red maple on this soil is moderate. Because of the seasonal high water table, seedling mortality is severe for most hardwood species. Windthrow hazard is also severe because of restricted root growth. Saturated soil conditions cause severe load restrictions in the use of heavy equipment on this soil. Species tolerant to wet soil should be considered for management.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area on the landscape. If this soil is used, foundation drains and other forms of subsurface drainage, as well as protective coatings on basement walls, will be needed to control wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is the seasonal high water table. Roads should be constructed on raised coarse-grained fill material and adequate drainage systems installed. Construction costs may be significantly less if new roads are routed around this soil.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, and the soil's poor ability to filter effluent properly. A better suited site should be considered for this use. Higher spots within the map unit may perform better for this use. Conventional septic system designs will perform poorly on this soil. Because of rapid permeability, there is significant risk of ground water contamination.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the tendency for the soil to cave in. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area will also occur because of wetness. The excavation trench should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 4w undrained and 3w drained.

FeB—Fahey gravelly fine sandy loam, 3 to 8 percent slopes, loamy substratum

This very deep and moderately well drained soil occurs on footslopes of gravelly beach ridges and on slightly concave areas of undulating outwash plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown gravelly fine sandy loam

Subsoil:
9 to 18 inches, brown very gravelly loamy fine sand
18 to 27 inches, dark yellowish brown very gravelly loamy fine sand with common mottles in the lower part

Substratum:
27 to 45 inches, brown very gravelly sand with common mottles
45 to 72 inches, light olive brown very gravelly silt loam with many mottles

Included with this soil in mapping are about 5 percent somewhat poorly drained Coveytown and Wainola soils in swales and shallow drainageways. About 5 percent of this unit consist of moderately well drained Occur and Croghan soils having less gravel in the surface and subsoil. Small areas of moderately well drained Kalurah and Hogansburg soils are included on knolls where texture is dominantly loam without a sandy mantle. Small areas of excessively drained Colosse and Trout River soils are included on slightly higher, convex positions. Also included are small areas of very stony Fahey soils. In some areas, the surface texture is gravelly loamy fine sand or gravelly loamy sand. Included areas make up about 25 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the mineral surface, subsoil and upper substratum, and moderate or moderately slow in the underlying glacial till
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: 18 to 24 inches deep at some time during March through May
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as cropland. Some areas are used as pasture or woodland.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table may delay planting in the early spring. Surface and subsurface drainage, especially in areas of somewhat poorly drained inclusions, will improve efficiency of farm operations and increase crop yields. Droughtiness may also occur in mid-summer because of very low available water capacity. Because of high gravel and

sand content, the potential for pesticide and nutrient loss from leaching in this soil is high. Conservation tillage systems, crop rotation, maintenance of waterways, and the addition of manure and other supplements in proper amounts are good management practices.

This soil is well suited to pasture. The seasonal high water table may cause some wetness problems in barnyards and heavily traveled areas of the pasture especially in the spring. Forage plants may show stunted growth during the early part of the growing season as a result of wetness. Droughtiness may also affect forage production in mid-summer because of very low available water capacity. Rotational grazing, proper stocking rates, surface drainage, and yearly mowing are good management practices.

The potential productivity for growing eastern white pine on this soil is high. There are no major limitations for timber growth and management on this soil.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area in the map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

A moderate limitation if this soil is used as a site for local roads and streets is the seasonal high water table. Adequate drainage in critical areas of this unit can increase road surface durability.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the soil's poor ability to filter effluent properly. A better suited site should be considered for this use. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered. Because of its rapid permeability, there is a possibility of ground water contamination from septic effluent.

The main limitations if this soil is used as a site for shallow excavations are the tendency of the soil to cave in and the seasonal high water table. The banks of the excavation should be mechanically supported to avoid the possibility of soil caving in on workers or other victims. Seasonal wetness may delay digging operations during part of the year unless drainage is installed.

The capability subclass is 2w.

FhB—Fahey gravelly fine sandy loam, gently sloping, very stony

This very deep and moderately well drained soil occurs on footslopes of gravelly beach ridges and on undulating outwash plains. Large stones cover up to 3 percent of the soil surface. Slope ranges from 0 to 8 percent.

The typical sequence, depth and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown gravelly fine sandy loam

Subsoil:
9 to 18 inches, brown very gravelly loamy fine sand
18 to 27 inches, dark yellowish brown very gravelly loamy fine sand with common mottles in the lower part

Substratum:
27 to 45 inches, brown very gravelly sand with common mottles
45 to 72 inches, light olive brown very gravelly silt loam with many mottles

Included with this soil in mapping are about 5 percent somewhat poorly drained Coveytown and Wainola soils in swales and shallow drainageways. About 5 percent of this unit consist of moderately well drained Occur and Croghan soils having less gravel in the surface and subsoil. Small areas of moderately well drained Kalurah soils are included on knolls where texture is dominantly loam without a sandy mantle. Small areas of excessively drained Colosse and Trout River soils are included on slightly higher convex positions. Also included are small areas of non-stony Fahey soils. In some areas, the surface texture is gravelly loamy fine sand or gravelly loamy sand. Included areas make up about 25 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the mineral surface, subsoil and upper substratum; but moderate or moderately slow in the underlying glacial till
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: 18 to 24 inches deep at some time during March through May
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland.

This soil is poorly suited to growing cultivated crops and hay. Large surface stones interfere with planting and other equipment operations causing significant wear on machinery. Also, the seasonal high water table may delay planting in the spring. Surface and subsurface drainage, especially in somewhat poorly drained inclusions, will help to improve the efficiency of farm operations and increase crop yields. Because of high gravel and sand content, the potential for pesticide and nutrient loss from leaching in this soil is high. Stone removal, conservation tillage systems, crop rotation, maintenance of waterways, and the addition of manure and other supplements in proper amounts are good management practices.

This soil is poorly suited to pasture. Large surface stones interfere with proper pasture maintenance operations like yearly mowing. Also, the seasonal high water table may cause some wetness problems in barnyards and heavily traveled areas of the pasture especially in the spring. Forage plants may show stunted growth during the early part of the growing season as a result of wetness. Stone removal, rotational grazing, proper stocking rates, surface drainage, and yearly mowing are good management practices.

The potential productivity for growing eastern white pine on this soil is high. There are no major limitations for timber growth and management on this soil.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered, such as a higher area in the map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

Moderate limitations of this unit for local roads and streets are the seasonal high water table and large surface stones. Installation of drainage in critical areas will increase the durability of the road surface.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the soil' poor ability to filter effluent properly. A better suited site should be considered. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered. Because of the rapid permeability, there is a possibility of ground water contamination from septic effluent.

The main limitations if this soil is used as a site for shallow excavations are the tendency of the soil to cave in and the seasonal high water table. The banks of the excavation should be mechanically supported to avoid the possibility of soil caving in on workers or other victims. Seasonal wetness may restrict digging operations without drainage installed.

The capability subclass is 6s.

FkB—Fernlake cobbly loamy sand, 3 to 8 percent slopes

This very deep, gently sloping, and somewhat excessively drained soil occurs on broad ridges and undulating glacial till uplands.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, dark reddish brown slightly decomposed leaves and roots
1 to 2 inches, black cobbly loamy sand

Subsurface layer:
2 to 3 inches, mixed reddish gray and brown cobbly loamy sand

Subsoil:
3 to 5 inches, reddish brown cobbly loamy sand
5 to 11 inches, brown cobbly loamy sand
11 to 17 inches, strong brown cobbly loamy sand
17 to 21 inches, dark yellowish brown cobbly loamy sand
21 to 33 inches, mixed brown and grayish brown cobbly loamy sand

Substratum:
33 to 72 inches, grayish brown gravelly loamy sand

Included with this unit in mapping are about 5 percent Hermon soils having more gravel or cobbles in the subsoil and substratum. About 5 percent of this unit are the well drained Monadnock and moderately well drained Sunapee soils having less sand in the solum. In some small areas, the soil has a thin dense substratum similar to Becket soils. Small inclusions of Adams soils are included where the substratum is either stratified or lacks silt coatings on sand and gravel. Also included are soils similar to Fernlake but are dominantly sandy loam throughout. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid or rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in brush or woodland.

This soil is generally well suited to growing cultivated crops and hay. Droughtiness; however, may be a limiting factor in the productivity of this soil during the latter part of the growing season because of low available water capacity. Amendments of organic matter will improve the moisture holding ability. Conservation tillage systems, crop rotation, the use of cover crops, and the addition of manure and other supplements in proper amounts are good management practices.

This soil is well suited to pasture. Droughtiness during the summer may threaten optimal forage production on this soil. Overgrazing should be avoided. Rotational

grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity of this soil for growing eastern white pine is high. Because of low available water capacity, seedling mortality on this soil may be significant during some years as a result of droughtiness. Drought-tolerant species should be chosen for planting on this soil.

There are no major limitations if this soil is used as a site for dwellings with or without basements.

There are no major limitations if this soil is used as a site for local roads and streets.

The main limitation if this soil is used as a site for septic tank absorption fields is the inadequate filtration of effluent in some areas. Other areas of this unit having moderately rapid permeability will be adequate for conventional systems. Alternative designs of septic systems that augment the filtering capacity of this soil should be considered. Rapid permeability in this soil may allow septic effluent to reach the ground water before adequate treatment.

The main limitation if this soil is used as a site for shallow excavations is the tendency for cutbanks to cave in. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 2s.

FlB—Fernlake cobbly loamy sand, gently sloping, very bouldery

This very deep and somewhat excessively drained soil occurs on broad ridges and undulating glacial till upland. Large stones cover up to 3 percent of the soil surface. Slopes range from 3 to 8 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, dark reddish brown slightly decomposed leaves and roots
1 to 2 inches, black cobbly loamy sand

Subsurface layer:
2 to 3 inches, mixed reddish gray and brown cobbly loamy sand

Subsoil:
3 to 5 inches, reddish brown cobbly loamy sand
5 to 11 inches, brown cobbly loamy sand
11 to 17 inches, strong brown cobbly loamy sand
17 to 21 inches, dark yellowish brown cobbly loamy sand
21 to 33 inches, mixed brown and grayish brown cobbly loamy sand

Substratum:
33 to 72 inches, grayish brown gravelly loamy sand

Included with this unit in mapping are about 5 percent Hermon soils having more gravel or cobbles in the subsoil and substratum. About 5 percent of this unit are the well drained Monadnock and moderately well drained Sunapee soils having less sand in the solum. In some small areas, the soil has a thin dense substratum similar to Becket soils. Small inclusions of Adams soils are included where the substratum is either stratified or lacks silt coatings on sand and gravel. Also included are soils similar to Fernlake but are dominantly sandy loam throughout. Some areas lack a bouldery surface. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid or rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland.

This soil is poorly suited to growing cultivated crops and hay. Large surface stones interfere with soil preparation, planting, harvesting, and causes deterioration of farm machinery. Droughtiness may be a limiting factor in the productivity of this soil during the growing season because of the low available water capacity. Amendments of organic matter will improve the moisture holding ability. Stone removal, conservation tillage systems, crop rotation, manure, and the use of cover crops are good management practices.

This soil is poorly suited to pasture because of surface boulders and stones. Removal of boulders will enhance forage yield and allow for yearly mowing and other pasture maintenance. Droughtiness during the summer may threaten optimal forage production on this soil. Overgrazing should be avoided. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine is high on this soil. Because of the low available water capacity, seedling mortality on this soil may be significant during some years as a result of droughtiness. Drought-tolerant species should be chosen for planting on this soil.

There are no major limitations if this soil is used as a site for dwellings with or without basements.

There are no major limitations if this soil is used as a site for local roads and streets.

The main limitation if this soil is used as a site for septic tank absorption fields is the inadequate filtration of effluent in some areas. Other areas of this unit having moderately rapid permeability will be adequate for conventional systems. Alternative designs of septic systems that augment the filtering capacity of this soil should be considered. Rapid permeability in this soil may allow septic effluent to reach the ground water before adequate treatment.

The main limitation if this soil is used as a site for shallow excavations is the tendency for cutbanks to cave in. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 6s.

FlC—Fernlake cobbly loamy sand, strongly sloping, very bouldery

This very deep and somewhat excessively drained soil occurs on side slopes and rolling glacial till uplands. Large stones cover up to 3 percent of the soil surface. Slopes range from 8 to 15 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, dark reddish brown slightly decomposed leaves and roots
1 to 2 inches, black cobbly loamy sand

Subsurface layer:
2 to 3 inches, mixed reddish gray and brown cobbly loamy sand

Subsoil:
3 to 5 inches, reddish brown cobbly loamy sand
5 to 11 inches, brown cobbly loamy sand
11 to 17 inches, strong brown cobbly loamy sand
17 to 21 inches, dark yellowish brown cobbly loamy sand
21 to 33 inches, mixed brown and grayish brown cobbly loamy sand

Substratum:
33 to 72 inches, grayish brown gravelly loamy sand

Included with this unit in mapping are about 5 percent Hermon soils having more gravel or cobbles in the subsoil and substratum. About 5 percent of this unit are the well drained Monadnock having less sand in the solum. In some small areas, the soil has a thin dense substratum similar to Becket soils. In slight depressions and near drainageways are inclusions of moderately well drained Sunapee soils. Small inclusions of Adams soils are included where the substratum is either stratified or lacks silt coatings on sand and gravel. Some areas lack a bouldery surface. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid or rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland.

This soil is poorly suited to growing cultivated crops and hay. Large surface stones interfere with soil preparation, planting, and harvesting causing deterioration of farm machinery. Droughtiness may be a limiting factor in the productivity of this soil during the growing season because of low available water capacity. Amendments of organic matter will improve the moisture holding ability. Stone removal, conservation tillage systems, crop rotation, manure, and the use of cover crops are good management practices.

This soil is poorly suited to pasture because of surface boulders and stones. Removal of boulders will enhance forage yield and allow for yearly mowing and other pasture maintenance. Droughtiness during the summer may threaten optimal forage production on this soil. Overgrazing should be avoided. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity if this soil is used as a site for growing eastern white pine is high. Because of low available water capacity, a moderate seedling mortality on this soil may occur during some years as a result of droughtiness. Drought-tolerant species should be chosen for planting on this soil.

The main limitation if this soil is used as a site for dwellings is slope. Because of the strongly sloping topography, some grading and smoothing will be needed in landscaping around the house.

The main limitation if this soil is used as a site for local roads and streets is slope. Roads should be routed along the contour, where possible, to avoid significant grading and stabilization of roadbanks.

The main limitation if this soil is used as a site for septic tank absorption fields is the inadequate filtration of effluent in some areas. Other areas of this unit having moderately rapid permeability will be adequate for conventional systems. Alternative designs of septic systems that augment the filtering capacity of this soil should be considered. Rapid permeability in this soil may allow septic effluent to reach the

ground water before adequate treatment. Less sloping inclusions or nearby areas will probably be less expensive to develop for this use.

The main limitation if this soil is used as a site for shallow excavations is the tendency for cutbanks to cave in. Slope is a moderate limitation. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims. The use of machines will be more difficult on this soil than on lesser sloping areas.

The capability subclass is 6s.

FID—Fernlake cobbly loamy sand, moderately steep, very bouldery

This very deep and somewhat excessively drained soil occurs on side slopes and hilly glacial till uplands. Large stones cover up to 3 percent of the soil surface. Slopes range from 15 to 25 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, dark reddish brown slightly decomposed leaves and roots
1 to 2 inches, black cobbly loamy sand

Subsurface layer:
2 to 3 inches, mixed reddish gray and brown cobbly loamy sand

Subsoil:
3 to 5 inches, reddish brown cobbly loamy sand
5 to 11 inches, brown cobbly loamy sand
11 to 17 inches, strong brown cobbly loamy sand
17 to 21 inches, dark yellowish brown cobbly loamy sand
21 to 33 inches, mixed brown and grayish brown cobbly loamy sand

Substratum:
33 to 72 inches, grayish brown gravelly loamy sand

Included with this unit in mapping are about 5 percent Hermon soils having more gravel or cobbles in the subsoil and substratum. About 5 percent of this unit are the well drained Monadnock having less sand in the solum. In some small areas, the soil has a thin dense substratum similar to Becket or Skerry soils. Some areas lack a bouldery surface. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid or rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland.

This soil is poorly suited to growing cultivated crops and hay because of slope and boulders. The moderately steep slopes make operation of farm machinery more difficult and dangerous. Serious erosion will likely occur under cultivation. Large surface stones interfere with soil preparation, planting and harvesting causing deterioration of farm machinery. Droughtiness may be a limiting factor in the

productivity of this soil during the growing season because of the low available water capacity. Amendments of organic matter will improve the moisture holding ability. Stone removal, conservation tillage systems, contour farming, crop rotation, and the use of cover crops are good management practices.

This soil is poorly suited to pasture because of surface boulders and slope. Removal of boulders will enhance forage yields and encourage the practice of yearly mowing and other pasture maintenance. Droughtiness during the summer may threaten optimal forage production on this soil. Erosion can become a serious problem in areas of sparse vegetation. Therefore, overgrazing should be avoided. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity of this soil for growing eastern white pine is high. Because of low available water capacity, a moderate seedling mortality on this soil may occur during some years as a result of droughtiness. Drought-tolerant species should be chosen for planting on this soil. These moderately steep slopes will make use of machinery more difficult than on lesser sloping soils.

The main limitation if this soil is used as a site for dwellings is slope. Because of the moderately steep topography, intensive grading and smoothing will be needed in landscaping around the house. Dwellings should be sited and designed in accordance with the natural slope to minimize the cost of development. Lesser sloping, nearby areas or inclusions will be less expensive to develop.

The main limitation if this soil is used as a site for local roads and streets is slope. Roads should be routed along the contour where possible to avoid significant costs associated with smoothing, grading, and stabilization of roadbanks.

The main limitations if this soil is used as a site for septic tank absorption fields are the soil' poor ability to filter effluent properly and slope. A better suited site should be considered such as a nearby lesser sloping unit. The rapid permeability in this soil may allow septic effluent to reach the groundwater before adequate treatment. Alternative designs of septic systems that augment the filtering capacity of this soil should be considered. Excessive slope may also cause some lateral seepage and surfacing of effluent in downslope areas.

The main limitations if this soil is used as as site for shallow excavations are the tendency for cutbanks to cave in and moderately steep slopes. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims. Safe use of machines will be more difficult on this soil than on lesser sloping areas.

The capability subclass is 6s.

FlF—Fernlake cobbly loamy sand, very steep, very bouldery

This very deep and somewhat excessively drained soil occurs on stream dissected areas of glacial till uplands. Large stones cover up to 3 percent of the soil surface. Slopes range from 35 to 60 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, dark reddish brown slightly decomposed leaves and roots
1 to 2 inches, black cobbly loamy sand

Subsurface layer:
2 to 3 inches, mixed reddish gray and brown cobbly loamy sand

Subsoil:
3 to 5 inches, reddish brown cobbly loamy sand
5 to 11 inches, brown cobbly loamy sand
11 to 17 inches, strong brown cobbly loamy sand
17 to 21 inches, dark yellowish brown cobbly loamy sand
21 to 33 inches, mixed brown and grayish brown cobbly loamy sand

Substratum:
33 to 72 inches, grayish brown gravelly loamy sand

Included with this unit in mapping are about 10 percent Hermon soils having more gravel or cobbles in the subsoil and substratum. About 5 percent of this unit are well drained Monadnock soils having less sand in the subsoil. Also included are small areas of Adams and Colton soils which have a substratum that is either stratified or has silt coatings on sand and gravel. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid or rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland.

This soil is not suited to growing cultivated crops or hay because of very steep slopes and surface boulders. The very steep slopes make operation of farm machinery dangerous and impractical.

This soil is poorly suited to pasture because of surface boulders and very steep slopes. Removal of boulders will enhance forage density; however, very steep slopes will deter yearly mowing and other pasture maintenance. Droughtiness during the summer may threaten optimal forage production on this soil. Erosion can become a serious problem in areas of sparse vegetation. Therefore, overgrazing should be avoided. Rotational grazing and proper stocking rates are good pasture management practices.

The potential productivity of this soil for growing eastern white pine is high. Because of low available water capacity, a moderate seedling mortality on this soil may occur during some years as a result of droughtiness. Drought-tolerant species should be chosen for planting on this soil. These very steep slopes will make the use of machinery very difficult and unsafe. Erosion can be a management problem in areas of timber removal and skid roads.

The main limitation if this soil is used as a site for dwellings is the very steep slope. A better suited site should be considered for this use such as a nearby gently sloping area. Intensive grading and smoothing will be needed in landscaping around the house. Dwellings should be sited and designed in accordance with the natural slope to minimize cost of development.

The main limitation if this soil is used as a site for local roads and streets is the very steep slope. Roads should be routed around this unit where possible to avoid significant grading and stabilization costs.

The main limitations if this soil is used as a site for septic tank absorption fields are the soil's poor ability to filter effluent properly and the very steep slopes. A better suited site should be considered such as a nearby lesser sloping unit. Rapid permeability in this soil may allow septic effluent to reach the ground water or come to the surface downslope before adequate treatment.

The main limitations if this soil is used as a site for shallow excavations are the tendency for cutbanks to cave in and very steep slopes. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims. The use of excavation machinery will be very difficult and unsafe on this soil.

The capability subclass is 7s.

FmB—Flackville loamy fine sand, 3 to 8 percent slopes

This very deep and moderately well drained soil is on slightly convex or undulating areas of lake plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 12 inches, very dark grayish brown loamy fine sand

Subsurface layer:
12 to 14 inches, light brownish gray fine sand

Subsoil:
14 to 16 inches, dark brown sand
16 to 22 inches, brown sand
22 to 26 inches, very pale brown loamy fine sand with common mottles

Substratum:
26 to 48 inches, dark grayish brown silty clay with many mottles
48 to 72 inches, grayish brown silty clay with common mottles

Included with this soil in mapping are about 5 percent somewhat poorly drained Swanton soils in slight depressions and along drainageways. About 5 percent of this unit includes somewhat poorly drained Wainola and Sciota soils, and moderately well drained Croghan soils where deep sandy deposits occur. Also included are about 5 percent moderately well drained soils that are loamy over silts and clay. Also included are soils similar to moderately deep Neckrock soils, and soils similar to Mino soils and having deep loamy deposits. Small areas of this soil mapped near Lake Champlain have a longer growing season than Flackville soils. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the sandy upper part, and slow or very slow in the clayey part
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: perched 18 to 24 inches below the surface at some time during November through May
Root zone: mainly to 24 inches deep
Shrink-swell potential: low in the sandy part, and moderate in the clayey part
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for growing hay or corn. This soil qualifies as prime farmland in Clinton County.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table may delay planting and harvesting operations after periods of heavy precipitation. Installation of drainage, especially in somewhat poorly drained inclusions, will aid in the efficiency of farm operations. Conservation tillage systems, crop rotations and establishing a cover crop are good management practices.

This soil is well suited to pasture. The seasonal high water table may cause some wetness problems in barnyards and other heavily traveled areas. Erosion can be a management problem particularly on long slopes subject to heavy grazing. Rotational

grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major woodland management limitations on this soil.

The main limitation if this soil is used as a site for dwellings with basements is the seasonal high water table. A better suited site should be considered such as a higher area in the map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

Moderate limitations on this soil for local roads and streets are the seasonal high water table, frost action, and shrink-swell potential in the substratum. Providing a coarse-grained subgrade material will reduce frost action. Adequate surface and subsurface drainage in critical areas will also decrease the potential for frost action as well as wetness.

The main limitations if this soil for septic tank absorption fields are the seasonal high water table, the slow permeability in the clayey substratum, and the soil's poor ability to filter effluent properly in the upper part of the soil. A better suited site should be considered for this use. If this soil is used, higher spots would likely perform better for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the tendency for sidewalls to cave in. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness. Trench walls should be supported mechanically to prevent cave-in on workers or other victims.

The capability subclass is 2w.

Fn—Fluvaquents-Udifluvents complex, frequently flooded

This unit consists of very deep sediments deposited by rivers and streams on floodplains. Frequent flooding from nearby rivers and streams generally results in the erosion and redeposition of soil material from one place to another within this unit. Fluvaquents occur on slightly concave positions such as abandoned stream channels and stagnant water areas. Udifluvents occur on slightly convex positions such as low benches and small islands near active stream channels. This unit consists of about 30 percent poorly drained and 20 percent somewhat poorly drained Fluvaquents, 40 percent well drained Udifluvents, and 10 percent other soil types. Fluvaquents and Udifluvents are so intermingled on the landscape that it was not practical to map them separately. Slopes range from 0 to 3 percent.

The sequence, depth, and composition of a pedon of Fluvaquents is variable, but the general range of the soil characteristics are as follows—

Surface layer:

0 to 8 inches; black to very dark grayish brown sandy loam to mucky silt loam with variable amounts of gravel and cobbles

Substratum:

8 to 72 inches; very dark gray to pale olive sandy loam to silty clay loam with variable amounts of gravel and cobbles. It commonly has mottles.

The sequence, depth, and composition of a pedon of Udifluvents is also variable, but the general range of the soil characteristics are as follows—

Surface layer:

0 to 4 inches; very dark brown to light yellowish brown loamy sand to loam with variable amounts of gravel and cobbles

Substratum:
4 to 72 inches; dark brown to olive stratified layers of deposits from sand to silty clay loam with variable amounts of gravel and cobbles

Included with this unit in mapping are about 5 percent moderately well drained Lovewell and somewhat poorly drained Cornish soils on slightly higher areas of meandering streams where soil textures are more uniform. Small areas of poorly drained Rumney and very poorly drained Medomak soils occur in slight depressions away from the active stream channel. Small areas of very poorly drained Wonsqueak soils occur in bog-like areas at the margin of flood plains. Also included are small areas of well drained soils similar to Adams or Colton. Included areas make up about 10 percent of this unit and range up to 5 acres each.

Soil Properties of Fluvaquents—

Permeability: ranges from slow to rapid; on-site investigation needed
Available water capacity (average for 40-inch profile): ranges from low to high; onsite investigation needed
Depth to seasonal high water table: 6 inches above the surface to 18 inches deep at some time from October to June
Root zone: mainly to 12 inches deep
Shrink-swell potential: low; on-site investigation needed
Depth to bedrock: greater than 60 inches

Soil Properties of Udifluvents—

Permeability: ranges from slow to rapid; on-site investigation needed.
Available water capacity (average for 40-inch profile): ranges from very low to high; onsite investigation needed
Depth to seasonal high water table: 24 to 72 inches deep at some time from November to May
Root zone: mainly to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in brush or woodland.
The variability of the characteristics and frequent flooding are major limitations for most uses of this unit other than wetland wildlife habitat.
The capability subclass is 5w.

GfC—Gardenisle-Benson complex, strongly sloping, rocky

This unit consists of strongly sloping and gently sloping soils overlying calcareous shale or limestone bedrock on ridges and benches. The Gardenisle soils are moderately deep, well drained, and are generally on broad ridgetops and benches and on mid-slope positions. The Benson soils are shallow, somewhat excessively drained, and are generally on shoulders of slopes and on high areas of narrow ridges and benches. Exposed bedrock occupies about 1 percent of the surface of this unit. This unit consists of about 45 percent Gardenisle soils, 35 percent Benson soils, and 20 percent other soils. The Gardenisle and Benson soils are so intermingled that it was not practical to map them separately. Slopes range from 3 to 15 percent.
The typical sequence, depth, and composition of the layers of Gardenisle soils are as follows—
Surface layer:
0 to 5 inches, very dark grayish brown loam

Subsoil:
5 to 9 inches, brown loam
9 to 17 inches, brown gravelly loam

Substratum:
17 to 24 inches, dark brown very channery loam
24 to 34 inches, very dark gray highly weathered bedrock with silt loam between rock layers
34 inches, gray calcareous shale bedrock

The typical sequence, depth, and composition of the layers of Benson soils are as follows—
Surface layer:
0 to 6 inches, dark brown loam

Subsoil:
6 to 11 inches, brown channery silty clay loam
11 to 14 inches, mixed dark yellowish brown and brown very channery silty clay loam

Substratum:
14 to 18 inches, brown, extremely channery silty clay loam
18 inches, dark gray calcareous shale bedrock

Amenia and Massena soils on footslopes and in areas between ridges. About 5 percent of this unit consists of somewhat poorly drained Muskellunge soils, and very poorly drained Adjidaumo and Runeberg soils along toe slopes and in swales. Small inclusions of somewhat poorly drained or poorly drained, moderately deep soils similar to Ogdensburg soils are in slightly concave areas. Also included are small areas of very shallow soils near rock outcrops. Small areas of steeper slopes are included particularly along the Lake Champlain shoreline (fig. 14). Inclusions make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties of the Gardenisle soils—

Permeability: moderate in the surface and upper subsoil, moderate or moderately slow in the lower subsoil and friable substratum, and moderately slow or slow in firm material above the unweathered bedrock
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock depth
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Soil Properties of the Benson soils—

Permeability: moderate in the surface and subsoil, and moderately slow in the substratum
Available water capacity (average for 40-inch profile): very low to low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock depth
Shrink-swell potential: low
Depth to bedrock: 10 to 20 inches

Most areas of this unit are used as woodland or brushland.

This unit is poorly suited to cultivated crops and hay. Rock outcrops and shallow depth to bedrock can make management difficult and cause excessive wear on machinery. Erosion can be a serious problem, especially on shallow Benson soils, and may result in significant loss of soil productivity. Maintaining vegetative cover on

Figure 14. —Part of Cumberland Head, in the Town of Plattsburgh, is underlain by interbedded argillite and limestone bedrock within 40 inches of the surface. This pasture is on the Gardenisle - Benson complex.

this unit will help conserve topsoil. Because of the loamy surface and shallow depth in Benson soils, the potential for pesticide and nutrient loss from runoff is high for part of this unit.

This unit is poorly suited to pasture. Rock outcrops interfere with equipment use limiting pasture improvements and management. Erosion is a serious management concern on heavily traveled areas. Avoiding excessive grazing will help prevent significant erosion. Key pasture species may succumb to weed competition if grazing is left unchecked. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this unit is moderate. Seedling mortality tends to be severe in shallow Benson soils because of low available water capacity. Selecting varieties which are tolerant of dry soil conditions while planting during moist soil conditions will improve seedling survival. Because of depth to bedrock, there is a risk of windthrow on this unit. Planting trees that are tolerant of shallow rooting depth and minimizing clear-cutting practices will reduce potential windthrow.

The main limitation if this unit is used as a site for dwellings with basements is the depth to bedrock, especially in areas of Benson soils. Depth to bedrock is a moderate limitation for areas of Gardenisle soils. Inclusions of deeper soils may be better suited. Dwellings with basements in most areas of this unit will have to be built on bedrock and landscaped with additional fill.

The main limitation if this unit is used as a site for local roads and streets is the depth to bedrock, especially in areas of Benson soils. Depth to bedrock and frost action are moderate limitations for areas of Gardenisle soils. Where rock is

encountered, some blasting may be necessary to allow for proper grading and smoothing. Planning road locations and grades so that rock removal is not needed will help to overcome the bedrock limitation.

The main limitation if this unit is used as a site for septic tank absorption fields is depth to bedrock. This soil may inherently allow seepage of sewage effluent into nearby water supplies. A better suited site on very deep inclusions or nearby units should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this unit is used as a site for shallow excavations is the depth to bedrock. Digging may be difficult especially in massive limestone bedrock areas. Selecting deeper, nearby soils in which to install utilities will facilitate excavation.

The capability subclass is 3e for Gardenisle and 4e for Benson.

Gl—Gougeville mucky loamy fine sand

This very deep, nearly level, and poorly drained soil occurs in slight depressions and basin-like areas on sandy lake plains. Slopes range from 0 to 3 percent, but is dominantly 0 to 1 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 6 inches, very dark brown mucky loamy fine sand

Substratum:
6 to 12 inches, light brownish gray fine sand with many mottles
12 to 40 inches, grayish brown fine sand with many mottles
40 to 58 inches, gray fine sand with common mottles
58 to 72 inches, dark gray fine sand

Included with this soil in mapping are about 5 percent very poorly drained Markey soils in low areas of the landscape where thick organic deposits have accumulated over sands. About 5 percent somewhat poorly drained Junius soils are included on slightly higher positions. Small areas of somewhat poorly drained Northway soils are included on slightly higher sandy spots underlain by loamy deposits. Also included are soils similar to Gougeville soils, but ponded during more of the growing season. Some areas of this unit were observed to have fine sand or fine sandy loam surface textures. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid in the surface, and moderately rapid or rapid below
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: at the surface to 12 inches below the surface at some time during November through June
Root zone: dominantly to 12 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland or brushland.

This soil is poorly suited to growing cultivated crops and hay because of the seasonal high water table. The surface is saturated by water during much of the growing season. Drainage will likely be expensive to install and maintain. Outlets may be very difficult to establish without draining important wetland.

This soil is poorly suited to pasture. The seasonal high water table is near the surface during much of the growing season. Most areas of this soil will not support typical pasture plant species. Ground conditions tend to be soft under livestock traffic and subject to erosion. Deferred grazing, rotational grazing, proper stocking rates, and yearly mowing are good management practices.

The potential productivity for growing red maple on this soil is moderately high. Because of the seasonal high water table, seedling mortality is severe for most hardwood species. Windthrow hazard is also severe because of restricted root growth. Under saturated soil conditions, the use of heavy equipment is generally limited to drier periods of the year or to frozen ground conditions.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table or ponding. A better suited site should be considered such as a higher area on the landscape.

The main limitations if this soil is used as a site for local roads and streets are the seasonal high water table and ponding. Roads should be constructed on raised coarse grained fill material and adequate drainage systems installed.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, and the soil's poor ability to filter effluent properly. A better suited site should be considered for this use. Because of rapid permeability, there is the probability of ground water contamination.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the tendency for the soil to cave in. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area will also likely occur because of wetness. The excavation trench should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 5w undrained, 4w drained.

GrA—Grattan loamy sand, 0 to 3 percent slopes

This very deep, nearly level, and excessively drained soil occurs on sandy plains and terraces.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 3 inches, black moderately decomposed organic matter
3 to 5 inches, very dark grayish brown loamy sand

Subsurface layer:
5 to 11 inches, gray sand
11 to 30 inches, strong brown loamy sand
30 to 41 inches, yellowish brown sand

Substratum:
41 to 72 inches, yellowish brown sand

Included with this soil in mapping are about 5 percent moderately well drained Covert soils in slight depressions and along drainageways. About 5 percent of this unit consists of Colton soils having very gravelly subsoil layers. Small inclusions of Plainfield soils occur where the subsoil is more yellowish brown. In areas near glacial till, there are small inclusions of similar soils with a loamy substratum. Also, there are small areas similar to Grattan, but gravelly or very gravelly. In some areas the surface texture is sand, fine sand, loamy fine sand, or sandy loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland or brush.

This soil is moderately suited to growing cultivated crops and hay. Droughtiness can be a limiting factor in productivity because of this soil's low available water capacity. Amendments of organic matter will improve the moisture holding ability. Because of the sandy texture and rapid permeability, potential for pesticide and nutrient loss from leaching in this soil is high. Conservation tillage systems, crop rotation, stripcropping, the use of cover crops, and the addition of manure and other supplements in proper amounts are good management practices.

This soil is moderately suited to pasture. Droughtiness during the summer can threaten optimal forage density. Key pasture plants should be tolerant to dry soil conditions for short periods of time. Overgrazing will reduce potential forage production and increase competition from weed species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is very high. Droughtiness can severely increase seedling mortality because of very low available water capacity. Drought-tolerant species should be considered for planting and management.

There are no major limitations if this unit is used as a site for dwellings with or without basements.

There are no major limitations if this unit is used as a site for local roads and streets.

The main limitation if this soil is used as a site for septic tank absorption fields is the soil's poor ability to filter effluent properly. A better suited site should be considered for this use such as a moderately rapid permeable soil. There is a possibility of ground water contamination because of the soil's rapid permeability. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system will help protect ground water supplies.

The main limitation if this soil is used as a site for shallow excavations is the danger of cut-banks caving in. Precautions can be taken to protect workers and other people from injury by providing mechanical supports to vertical cut banks.

The capability subclass is 3s.

GrB—Grattan loamy sand, 3 to 8 percent slopes

This very deep, gently sloping, and excessively drained soil occurs on slightly convex or undulating sandy plains and terraces.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 3 inches, black moderately decomposed organic matter
3 to 5 inches, very dark grayish brown loamy sand

Subsurface layer:
5 to 11 inches, gray sand

Subsoil:
11 to 30 inches, strong brown loamy sand
30 to 41 inches, yellowish brown sand

Substratum:
41 to 72 inches, yellowish brown sand

Included with this soil in mapping are about 5 percent moderately well drained Covert soils in slight depressions and along drainageways. About 5 percent of this unit consist of Colton soils having very gravelly subsoil layers. Small inclusions of Plainfield soils occur where the subsoil is more yellowish brown. In areas near glacial till, there are small inclusions of similar soils with a loamy substratum. Also, there are small areas of soil similar to Grattan, but gravelly or very gravelly. In some areas the surface texture is sand, fine sand, loamy fine sand, or sandy loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland or brushland.

This soil is moderately suited to growing cultivated crops and hay. Droughtiness can be a limiting factor in productivity because of the soil's low available water capacity. Amendments of organic matter will improve the moisture holding ability. Because of the sandy texture and rapid permeability, potential for pesticide and nutrient loss from leaching in this soil is high. Conservation tillage systems, crop rotation, stripcropping, the use of cover crops, and the addition of manure and other supplements in proper amounts are good management practices.

This soil is moderately suited to pasture. Droughtiness during the summer can threaten optimal forage density. Key pasture plants should be tolerant to dry soil conditions for short periods of time. Overgrazing will reduce potential forage production and increase competition from weed species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is very high. Droughtiness can severely increase seedling mortality because of very low available water capacity. Drought-tolerant species should be considered for planting and management.

There are no major limitations if this soil is used as a site for dwellings with or without basements.

There are no major limitations if this soil is used as a site for local roads and streets.

The main limitation if this soil is used as a site for septic tank absorption fields is the soil's poor ability to filter effluent properly. A better suited site should be considered for this use such as a moderately rapid permeable soil. There is a possibility of ground water contamination because of the soil's rapid permeability. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system will help protect ground water supplies.

The main limitation if this soil is used as a site for shallow excavations is the danger of cut-banks caving in. Precautions can be taken to protect workers and other people from injury by providing mechanical supports to vertical cut banks.

The capability subclass is 3s.

GvB—Grenville loam, 3 to 8 percent slopes

This very deep, gently sloping, and well drained soil is on the crest of elongated hills and other convex slopes on glacial till lowlands.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, dark brown loam

Subsoil:
9 to 12 inches, brown loam
12 to 17 inches, dark yellowish brown loam

Substratum:
17 to 35 inches, brown gravelly fine sandy loam
35 to 72 inches, brown gravelly fine sandy loam with common mottles

Included with this soil in mapping are about 5 percent moderately well drained Hogansburg soils on footslopes and in undulating areas. About 5 percent of this unit is comprised of moderately deep Neckrock soils, and very deep, somewhat poorly drained Malone soils. Neckrock soils are associated with limestone rock outcrop and are usually in the highest positions on the landscape. Malone soils are on footslopes and other slightly concave positions. Also in this unit are small areas on strongly sloping hillsides, and small areas with very stony surfaces as in unimproved pastures and woodlots. In some areas, the surface texture is fine sandy loam or very fine sandy loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface, subsoil, and upper substratum; moderately slow in the lower substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: 24 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for growing crops or hay. This soil qualifies as prime farmland in Clinton County.

This soil is well suited to growing cultivated crops and hay. Erosion can be a problem, especially on long slopes, and may result in reduced crop production. Cultivating along the contour of the slope will help minimize soil erosion. Conservation tillage systems, crop rotation, stripcropping, and the use of cover crops are good management practices.

This soil is well suited to pasture. Erosion can be a management problem, particularly on long slopes subject to heavy grazing. Avoiding excessive grazing will help control erosion and maintain desired plant species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. No major limitations exist for woodland management.

There are no major limitations if this soil is used as a site for dwellings with basements.

The main limitation if this soil is used as a site for local roads and streets is frost action. Providing coarse grained subgrade material to frost depth will reduce the potential for heaving and buckling of pavement. Adequate surface and subsurface drainage in areas of somewhat poorly drained inclusions also decreases the potential for frost action.

The main limitation if this soil is used as a site for septic tank absorption fields is the moderately slow permeability in the substratum. An alternate system or specially

designed septic tank absorption field needs to be considered for this soil to avoid seepage problems and prolong the system use.

The main limitation if this soil is used as a site for shallow excavations is the dense substratum. Excavation of soil material may be slower and somewhat more expensive than in soils with more friable or loose layers in the substratum.

The capability subclass is 2e.

GwC—Grenville loam, strongly sloping, very stony

This very deep and well drained soil occurs on elongated ridges and side slopes of glacial till lowlands. Large stones cover up to 3 percent of the soil surface. Slopes range from 3 to 15 percent.

The typical sequence, depth and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, dark brown loam

Subsoil:
9 to 12 inches, brown loam
12 to 17 inches, dark yellowish brown loam

Substratum:
17 to 35 inches, brown gravelly fine sandy loam
35 to 72 inches, brown gravelly fine sandy loam with common mottles

Included with this soil in mapping are about 10 percent moderately well drained Hogansburg soils on footslopes and undulating areas. About 5 percent moderately deep Neckrock soils are included near areas of limestone rock outcrop. Small areas of somewhat poorly drained Malone soils are included near seep spots and slightly concave positions. Also, small areas of non-stony soils and moderately steep soils are included. In some areas, the surface texture is very cobbly fine sandy loam or extremely stony fine sandy loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface, subsoil, and upper substratum; moderately slow in the lower substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: 24 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are used as woodland. A few remaining areas are used as unimproved pastureland or brushland.

This unit is poorly suited to growing cultivated crops and hay. The large surface stones inhibit efficient use of equipment and cause excessive wear on farm machinery. Erosion is a common problem particularly on long strongly sloping areas planted in row crops. Stone clearing, conservation tillage systems, crop rotation, stripcropping, and the use of cover crops are good management practices.

This unit is poorly suited to pasture. The large surface stones discourage some pasture management practices such as yearly mowing. Erosion may be a significant management problem on heavily grazed areas of this unit. Overgrazing should be avoided to reduce soil erosion and encourage key forage species. Stone clearing,

rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. Logging roads built along the contour of strongly sloping areas will be effective in reducing gully erosion.

The main limitation if this soil is used as a site for dwellings is slope. The strongly sloping areas of this unit will require some grading and landscaping expenses. Design of the dwelling should conform to the natural slope to minimize costs.

The main limitations if this soil is used as a site for local roads and streets are frost action and the strongly sloping topography. Construction plans should call for providing coarser grained subgrade material to frost depth. Adequate surface drainage in critical areas will also decrease the potential for frost action.

The main limitation if this soil is used as a site for septic tank absorption fields is the moderately slow permeability rate in the substratum. A better suited site should be considered for this use. An alternate system or specially designed septic tank absorption field needs to be considered for this soil to avoid seepage problems and prolong the system use.

The main limitations if this soil is used as a site for shallow excavations are the dense substratum and slope. Excavation of soil material may be slower and somewhat more expensive than soils with friable layers. Maneuvering equipment may also be more difficult because of strongly sloping areas.

The capability subclass is 6s.

Ha—Hailesboro silt loam

This very deep, nearly level, and somewhat poorly drained soil occurs on broad glacial lake plains and slightly concave areas on upland glacial till plains. Slopes range from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, dark brown silt loam

Subsoil layer:
9 to 15 inches, brown silt loam with few mottles
15 to 30 inches, dark grayish brown silty clay loam with common mottles

Substratum:
30 to 38 inches, gray silt loam with common mottles
38 to 72 inches, dark grayish brown silty clay loam

Included with this soil in mapping are about 5 percent somewhat poorly drained Muskellunge and Swanton soils. The Muskellunge soils contain more clay, and Swanton soils have a loamy surface and subsoil overlying a clayey substratum. About 5 percent of this unit includes poorly drained Adjidaumo soils in basin-like areas. Small areas of this unit contain somewhat poorly drained Roundabout and Mino soils. Roundabout soils are included in areas with less clay, and Mino soils contain more sand. In some areas the surface texture is very fine sandy loam. Inclusions make up about 20 percent of this unit and range up to 5 acres.

Soil Properties—

Permeability: moderate in the surface, and moderately slow in the subsoil and substratum
Available water capacity (average for 40-inch profile): high

Depth to seasonal high water table: 12 to 18 inches deep at some time during October through June
Root zone: dominantly to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as cropland. Some areas are used as pasture or hayland. Only drained areas of this soil qualify as prime farmland in Clinton County.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring. Surface and subsurface drainage will help to improve the efficiency of farm operations and increase crop yields. Conservation tillage systems, crop rotation, and maintenance of waterways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table can cause significant wetness problems in heavily traveled areas of the pasture especially in the spring. Forage may show stunted growth during the early part of the growing season as a result of wetness. Deferred grazing, rotational grazing, proper stocking rates, and yearly mowing are good management practices.

The potential productivity for growing white ash on this soil is high. Because of the seasonal high water table, soil wetness during spring will cause some difficulties in maneuvering heavy equipment. Rooting depth and wetness are limiting factors in seedling growth for some species, and may result in windthrow.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area nearby. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Construction designs can specify providing coarse grained subgrade material to minimize frost action. Adequate drainage in critical areas will also decrease the potential for frost action as well as diminish wetness.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the moderately slow permeability in the substratum. A better suited site should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness.

The capability subclass is 3w.

HeB—Hermon fine sandy loam, 3 to 8 percent slopes

This very deep, gently sloping, and somewhat excessively drained soil occurs on slightly convex ridges of glaciated upland till plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
3 inches thick layer of leaves and needles
0 to 2 inches, black fine sandy loam

Subsurface layer:
2 to 6 inches, reddish gray fine sandy loam

Subsoil:
6 to 10 inches, dark brown fine sandy loam
10 to 28 inches, strong brown very gravelly loamy sand
28 to 37 inches, dark yellowish brown very cobbly loamy sand

Substratum:
37 to 54 inches, brown very cobbly loamy sand
54 to 72 inches, brown cobbly loamy sand

Included with this soil in mapping are about 5 percent Fernlake soils having less rock fragments in the profile. About 5 percent well drained Monadnock and Bice soils are included where the soil is loamy in the solum. About 5 percent of this unit are Colton and Trout River soils where gravel and sand deposits are more stratified in the substratum. Small areas of Hermon soils with very stony surfaces are included. In slightly concave spots, there are small inclusions of moderately well drained Sunapee soils and soils similar to Adirondack soils. In some areas, the surface texture is sandy loam or loamy sand. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid or rapid in the mineral surface and subsoil, and rapid in the substratum
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: from the soil surface to 30 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as hayland or cropland. A few remaining areas are used as pasture.

This soil is well suited to growing cultivated crops and hay. However, droughtiness can be an important limiting factor in crop productivity because of low available water capacity. Amendments of organic matter will improve the soil's moisture holding ability. Conservation tillage systems, crop rotation, the use of cover crops, and the addition of manure and other supplements in proper amounts are good management practices.

This soil is well suited to pasture. Droughtiness during the summer may diminish forage production on this soil. Overgrazing should be avoided. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is high. Moderate seedling mortality may occur because of droughty soil conditions. Seedlings planted during moist soil conditions will help survival rates.

A moderate imitation if this soil is used as a site for dwellings is the presence of large stones and boulders below the surface. Excavation and removal of stones and boulders may increase construction costs.

A moderate imitation if this soil is used as a site for local roads and streets is the presence of large stones and boulders below the surface. Construction costs associated with removal of these stones will be more for this soil than in some other areas.

The main limitation if this soil is used as a site for septic tank absorption fields is the soil's poor ability to filter effluent properly. Alternative designs that augment the filtering capacity of this system should be considered. Because of rapid permeability, there is a possibility of ground water contamination.

The main limitation if this soil is used as a site for shallow excavations is the tendency of the sidewalls to cave in. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 2s.

HeC—Hermon fine sandy loam, 8 to 15 percent slopes

This very deep, strongly sloping, and somewhat excessively drained soil occurs on the backslopes and rolling areas of glaciated upland till plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
3 inches thick layer of leaves and needles
0 to 2 inches, black fine sandy loam

Subsurface layer:
2 to 6 inches, reddish gray fine sandy loam

Subsoil:
6 to 10 inches, dark brown fine sandy loam
10 to 28 inches, strong brown very gravelly loamy sand
28 to 37 inches, dark yellowish brown very cobbly loamy sand

Substratum:
37 to 54 inches, brown very cobbly loamy sand
54 to 72 inches, brown cobbly loamy sand

Included with this soil in mapping are about 5 percent Fernlake soils having less rock fragments in the profile. About 5 percent well drained Monadnock and Bice soils are included where the soil is loamy in the solum. About 5 percent of this unit includes Colton and Trout River soils where gravel and sand deposits are more stratified in the substratum. Small areas of Hermon soils with very stony surfaces are included. In slightly concave spots, there are small inclusions of moderately well drained Sunapee soils and soils similar to Adirondack soils. In some areas, the surface texture is sandy loam or loamy sand. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid or rapid in the mineral surface and subsoil, and rapid in the substratum
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to 30 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as hayland or pastureland.

This soil is moderately well suited to growing cultivated crops and hay. Erosion is a common problem, particularly on long slopes planted to row crops. Future crop productivity may be reduced by subsequent loss of valuable topsoil. Care should be taken when cultivating by moving along the contour of the landscape. Droughtiness can also be a significant concern during dry periods because of low available water capacity in areas of this unit. Conservation tillage systems, crop rotation, stripcropping, and the use of cover crops are good management practices.

This soil is moderately well suited to pasture. Erosion can be a significant management problem on heavily grazed areas of this soil. Overgrazing should be avoided to reduce soil erosion and to encourage key plant species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is high. Moderate seedling mortality may occur because of droughty soil conditions. Seedlings planted during moist soil conditions will help survival rates.

The moderate limitations if this soil is used as a site for dwellings are the strongly sloping topography and the presence of large stones below the surface. Building on the contour and landshaping can help reduce the slopes limitation. Excavation and removal of subsurface stones and boulders may increase construction costs.

Moderate limitations if this soil is used as a site for local roads and streets are the strongly sloping topography and the presence of large stones below the surface. New roads should be routed along the contour of the land where possible to reduce grading and smoothing costs. Large stones below the surface may also increase construction costs in some areas of this unit.

The main limitation if this soil is used as a site for septic tank absorption fields is the soil's poor ability to filter effluent properly. Alternative designs that augment the filtering capacity of this system should be considered. Because of rapid permeability, there is a possibility of ground water contamination.

The main limitation if this soil is used as a site for shallow excavations is the tendency of the sidewalls to cave in. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 3e.

HfC—Hermon fine sandy loam, strongly sloping, very bouldery

This very deep and somewhat excessively drained soil is on backslopes and rolling areas on glaciated upland valleys. Boulders cover up to 3 percent of the surface. Slopes range from 3 to 15 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
3 inches thick layer of leaves and needles
0 to 2 inches, black fine sandy loam

Subsurface layer:
2 to 6 inches, reddish gray fine sandy loam

Subsoil:
6 to 10 inches, dark brown fine sandy loam
10 to 28 inches, strong brown very gravelly loamy sand
28 to 37 inches, dark yellowish brown very cobbly loamy sand

Substratum:
37 to 54 inches, brown very cobbly loamy sand
54 to 72 inches, brown cobbly loamy sand

Included with this soil in mapping are about 5 percent Fernlake soils having less rock fragments in the profile. About 5 percent well drained Monadnock and Bice soils are included where the soil is loamy in the solum. About 5 percent of this unit includes soils where the gravel and sand deposits are more stratified in the substratum than in the Hermon soils. Examples are the Colton, Trout River, or Colosse soils. Small areas of Hermon soils with a non-stony surface are included. In slightly concave spots, there are small inclusions of moderately well drained Sunapee soils. Also, there are soils similar to Adirondack soils and soils similar to Hermon soils but are moderately well drained. In some areas, the surface texture is sandy loam or loamy sand. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid or rapid in the mineral surface and subsoil, and rapid in the substratum
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to 30 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland.

This soil is poorly suited to growing cultivated crops and hay. Surface stones and boulders inhibit efficient use of farm machinery and cause serious wear and tear on equipment. Because of the rapid permeability and a very stony surface, the potential for pesticide and nutrient loss from leaching in this soil is high. Stone clearing, conservation tillage, crop rotation, stripcropping, and use of cover crops are good management practices.

This soil is poorly suited to pasture. Surface stones and boulders inhibit yearly mowing and other maintenance practices. Erosion can be a significant problem on strongly sloping and heavily grazed areas of this unit. Overgrazing should be avoided so as to reduce soil erosion and encourage key pasture species. Stone removal, rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is high. Moderate seedling mortality may occur because of droughty soil in summer. Seedlings planted during moist soil conditions will help survival rates. The presence of surface boulders also may moderately limit the maneuverability of equipment.

The moderate limitations if this soil is used as a site for dwellings are the strongly sloping topography and the presence of large stones below the surface. Building on the contour and landshaping can lessen the limitation of strong slopes. Excavation and removal of stones and boulders may increase construction costs.

Moderate limitations if this soil is used as a site for local roads and streets are the strongly sloping topography and the presence of large stones below the surface. New roads should be routed along the contour of the land where possible to reduce grading and smoothing costs. The presence of large stones in this soil will also increase construction costs in some areas.

The main limitation if this soil is used as a site for septic tank absorption fields is the soil’s poor ability to filter effluent properly. Alternative designs that augment the filtering capacity of this system should be considered. Because of the rapid permeability, there is a possibility of ground water contamination.

The main limitation if this soil is used as a site for shallow excavations is the tendency of the sidewalls to cave in. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 6s.

HfD—Hermon fine sandy loam, moderately steep, very bouldery

This very deep and somewhat excessively drained soil is on hillsides of glaciated upland valleys. Boulders cover up to 3 percent of the surface. Slopes range from 15 to 35 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
3 inches thick layer of leaves and needles
0 to 2 inches, black fine sandy loam

Subsurface layer:
2 to 6 inches, reddish gray fine sandy loam

Subsoil:
6 to 10 inches, dark brown fine sandy loam
10 to 28 inches, strong brown very gravelly loamy sand
28 to 37 inches, dark yellowish brown very cobbly loamy sand

Substratum:
37 to 54 inches, brown very cobbly loamy sand
54 to 72 inches, brown cobbly loamy sand

Included with this soil in mapping are about 5 percent Colton soils in more stratified sand and gravel deposits near streams. Another 5 percent of this unit includes Fernlake soils having less rock fragments. Also included are areas of well drained Monadnock and Becket soils where texture in the solum is more loamy with less rock fragments. Both of these soils occupy similar positions on the landscape but Becket soils have a dense substratum. Included areas make up about 15 percent of the unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid or rapid in mineral the surface and subsoil, and rapid in the substratum
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to 30 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland.

This soil is poorly suited to growing cultivated crops and hay. The steep slopes and bouldery surface restrict cultivation and other equipment use. Erosion is a serious problem where vegetation is removed, or soil is otherwise disturbed. Because of rapid permeability and very stony surface, the potential for pesticide and nutrient loss from leaching in this soil is high.

This soil is poorly suited to pasture. The steep slopes and bouldery surface make proper management of forage plants difficult. Erosion is a serious concern on heavily traveled areas of this unit. Stone removal, rotational grazing, proper stocking rates, and yearly mowing are good management practices.

The potential productivity for growing eastern white pine on this soil is high. Seedling mortality may be severe because of droughty soil conditions. Seedlings planted during moist soil conditions will help survival rates. The presence of surface boulders also may moderately limit the maneuverability and safe use of equipment. Potential soil erosion can be reduced through selective cutting rather than clearcutting, and by placing logging roads along the contour of the land.

The main limitation if this soil is used as a site for dwellings is slope. Building sites will require grading and landscaping expenses. Lesser sloping inclusions or nearby soils are less expensive to develop for this purpose.

The main limitation if this unit is used as a site for local roads and streets is the moderately steep and steep slopes. Routing new roads around this unit may be a more cost-effective alternative. Building roads along the contour of the land will

alleviate this slope limitation. However, costs of grading and landscaping on areas of this soil will be high compared to less sloping inclusions or nearby map units.

The main limitation if this soil is used as a site for septic tank absorption fields are moderately steep and steep slopes and the soil's poor ability to filter effluent properly. A better suited site should be considered for this use including a less sloping inclusion.

The main limitations if this soil is used as a site for shallow excavations are slope and the tendency for trench walls to cave in. The side walls of the excavation should be mechanically supported to avoid the possibility of soil caving in on workers or other victims. Maneuvering most types of digging equipment on these moderately steep and steep slopes will be difficult, and may be very risky at times.

The capability subclass is 7s.

HgC—Hermon-Adirondack complex, strongly sloping, very bouldery

This unit consists of soils on footslopes and rolling areas of upland valleys. The somewhat excessively drained Hermon soils are on knolls and other convex slopes. The somewhat poorly drained Adirondack soils are in swales and near drainageways. Boulders cover up to 3 percent of the surface of this unit. This unit consists of about 60 percent Hermon soils, 20 percent Adirondack soils and 20 percent other soils. The Hermon and Adirondack soils are so intermingled that it was not practical to map them separately. Slopes range from 3 to 15 percent.

The typical sequence, depth, and composition of the layers of the Hermon soil are as follows—

Surface layer:
3 inches thick layer of leaves and needles
0 to 2 inches, black fine sandy loam

Subsurface layer:
2 to 6 inches, reddish gray fine sandy loam

Subsoil:
6 to 10 inches, dark brown fine sandy loam
10 to 28 inches, strong brown very gravelly loamy sand
28 to 37 inches, dark yellowish brown very cobbly loamy sand

Substratum:
37 to 54 inches, brown very cobbly loamy sand
54 to 72 inches, brown cobbly loamy sand

The typical sequence, depth, and composition of the layers of the Adirondack soil are as follows—

Surface layer:
0 to 5 inches, dark brown loam

Subsoil:
5 to 12 inches, brown loam with few mottles
12 to 18 inches, brown fine sandy loam with common mottles
18 to 22 inches, light brownish gray gravelly fine sandy loam with common mottles

Substratum:
22 to 72 inches, firm, brown gravelly fine sandy loam with few mottles

Included with this unit in mapping are about 5 percent somewhat excessively drained Fernlake and Adams soils having less rock fragments than Hermon soils in the profile. About 5 percent well drained Monadnock and moderately well drained

Sunapee soils are included where the soil is loamy in the solum. About 5 percent of this unit includes very poorly drained Sabattis and Tughill soils in drainageways and depressions. Small areas of Colton soils are included where the substratum is more stratified. Also included are soils similar to Hermon soils, but moderately well drained or somewhat poorly drained on toeslopes or footslopes. Inclusions make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties of the Hermon soils—

Permeability: moderately rapid or rapid in the mineral surface and subsoil, and rapid in the substratum
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to 30 inches deep or more
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Adirondack soils—

Permeability: moderate in the mineral surface and subsoil, and slow in the substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: perched 12 to 18 inches deep at some time during November through May
Root zone: mainly to 20 inches deep or less
Shrink swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are in woodland.

This unit is poorly suited to growing cultivated crops and hay. Large surface stones are an obstruction to effective management and cause excessive wear on machinery. Stone clearing is necessary to accommodate farm machinery use and to avoid significant damage and wear. Low positions within this unit may need drainage to allow for better management during planting season. Because of the rapid permeability in Hermon soils and a very stony surface, the potential for pesticide and nutrient loss from leaching in this soil is high.

This unit is poorly suited to pasture. Large stones covering the surface inhibit yearly mowing and other maintenance practices. Overgrazing may lead to muddying of the surface during wet periods and loss of desired forage plants. Stone removal, rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on areas of Hermon soils is high. The potential productivity for growing balsam fir on areas of Adirondack soils is high. Maneuvering heavy harvesting equipment in low areas of this unit may be difficult during wet periods. Seedling mortality may be severe in the Hermon part of this unit because of droughty soil conditions during summer. Rooting depth may be limited by the seasonal high water table and dense substratum in the Adirondack part, which may restrict seedling growth and result in windthrow in some areas of this unit. Selecting species that are tolerant of wet soil conditions in the lower areas of this unit will maximize seedling survival and reduce windthrow.

The main limitation is this soil is used as a site for dwellings is the seasonal high water table in areas of Adirondack soils. Hermon soils on higher parts of this unit or nearby Monadnock soils should be considered for this use. Foundation drains and protective coatings on basement walls will help alleviate some wetness especially near lower areas of this unit. Diversion ditches can also control surface water in some areas by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action in the Adirondack part of this unit. Constructing roads on a raised bed of coarse grained material and providing adequate surface and subsurface drainage will decrease potential frost action.

The main limitations if this unit is used as a site for septic tank absorption fields are the soil's poor ability to filter effluent properly in the Hermon part, and the seasonal high water table and slow permeability in the Adirondack part of this unit. A better suited site should be considered for this use. If this unit is used, an alternative design that augments the absorptive and filtering capacity of this soil will be needed.

The main limitations if this unit is used as a site for shallow excavations are the tendency of trench walls to cave in, and the seasonal high water table in areas of Adirondack soils. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims. Digging operations may be restricted to the drier periods of the year in the lower areas of this unit unless drainage is installed.

The capability subclass is 6s.

HIB—Heuvelton silty clay loam, 3 to 8 percent slopes

This very deep, gently sloping, and moderately well drained soil is on slightly convex areas and low ridges of lake plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 6 inches, dark brown silty clay loam

Subsoil:
6 to 10 inches, brown silty clay loam
10 to 18 inches, brown silty clay
18 to 22 inches, brown silty clay with common mottles
22 to 32 inches, grayish brown silty clay with many mottles
32 to 39 inches, dark grayish brown clay with many mottles

Substratum:
39 to 72 inches, dark gray clay with few mottles

Included with this soil in mapping are about 5 percent somewhat poorly drained Muskellunge soils in nearly level areas and slightly concave areas. About 5 percent of this unit includes poorly drained Adjidaumo soils and soils similar to Hogansburg soils with a higher clay content. Adjidaumo soils are in depressions and near drainageways. Some areas of this unit are well drained, or have bedrock within 60 inches deep. Heuvelton soils include warmer soils in southeastern Clinton County with longer growing seasons. Also, in some areas, the surface texture is silt loam and clay. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate or moderately slow in the surface and subsoil, and slow or very slow in the substratum.
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 18 to 24 inches deep at some time from November through April
Root zone: mainly to 24 inches deep
Shrink-swell potential: moderate
Depth to bedrock: more than 60 inches

Most areas of this soil are used for growing crops or hay. This soil meets the requirements of prime farmland in Clinton County.

This soil is well suited to growing cultivated crops and hay. Erosion can significantly reduce soil productivity especially on long slopes planted to row crops. Care should be taken by cultivating with the contour of the land. Residue management through conservation tillage systems, crop rotation, and the use of cover crops are good management practices.

This soil is well suited to pasture. Erosion can be a management problem particularly on long slopes subject to heavy grazing. Overgrazing should be avoided. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing northern red oak on this soil is moderately high. There are no major management limitations on this soil.

The main limitation if this soil is used as a site for dwellings with basements is the seasonal high water table. Foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water from higher elevations by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is the low soil strength and potential frost action. Good road design accounts for special construction techniques to provide adequate support for pavement and traffic. Coarse-grained subgrade material will diminish frost action if adequate drainage is installed.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and very slow permeability. A better suited site should be considered for this use. Well drained inclusions within this unit will likely perform better. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this soil should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness unless mechanical support or other precautions are taken.

The capability subclass is 2e.

HID—Heuvelton silty clay loam, 15 to 25 percent slopes

This very deep, moderately steep, and moderately well drained soil is on hillslopes and adjacent to drainageways on lake plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 6 inches, dark brown silty clay loam

Subsoil:
6 to 10 inches, brown silty clay loam
10 to 18 inches, brown silty clay
18 to 22 inches, brown silty clay with common mottles
22 to 32 inches, grayish brown silty clay with many mottles
32 to 39 inches, dark grayish brown clay with many mottles

Substratum:
39 to 72 inches, dark gray clay with few mottles

Included with this soil in mapping are about 5 percent well drained Grenville soils and moderately well drained Flackville soils. Grenville soils are loamy with more rock fragments throughout the soil. Flackville soils have a sandy mantle overlying clay. Also included are soils similar to Hailesboro soils with less clay, and areas that are well drained. Some areas have silty clay or clay surface textures. Included areas make up about 10 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate or moderately slow in the surface and subsoil, and slow or very slow in the substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 18 to 24 inches deep at some time from November through April
Root zone: mainly to 24 inches deep
Shrink-swell potential: moderate
Depth to bedrock: more than 60 inches

Most areas of this soil are used as pasture. Some areas are used as woodland.

This soil is poorly suited to growing cultivated crops and hay. Erosion is a serious management problem in areas not protected by vegetation because of moderately steep slopes. Maintaining a cover crop will conserve valuable topsoil for future hay production or other permanent vegetation.

This soil is poorly suited to pasture. Erosion is a serious management concern on heavily traveled areas of this soil. Overgrazing should be discontinued to avoid significant sheet and gully erosion. Key pasture species will also suffer from weed competition if grazing is left unchecked. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing northern red oak on this soil is moderately high. Equipment operation may be risky at times because of moderately steep slopes and slick clayey soil conditions when wet. These moderately steep soils have a severe erosion hazard on sites disturbed by logging. Placing skid roads along the contour of the land and installing waterbars are practices that reduce erosion.

The main limitations if this soil is used as a site for dwellings with basements are the seasonal high water table and the moderately steep slopes. A better suited site should be considered such as a less sloping area. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Design of the dwelling should conform to the natural slope to reduce the cost of grading and landscaping.

The main limitations if this soil is used as a site for local roads and streets are low soil strength, moderately steep slopes, and frost action potential. Where possible, new roads should be routed around this map unit. Adapting road design to the slope and along the contour will help minimize construction costs. The specification of coarse grained subgrade material along with adequate drainage will also provide for a more durable road surface.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, the very slow permeability, and the moderately steep slopes. A better suited site should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this soil should be considered.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the moderately steep slopes. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may occur because of wetness. Maneuvering equipment may be difficult and risky on these slopes.

The capability subclass is 4e.

HoA—Hogansburg loam, 0 to 3 percent slopes

This very deep, nearly level, and moderately well drained soil occurs on slightly undulating glacial till lowlands.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 10 inches, very dark grayish brown loam

Subsoil:
10 to 15 inches, brown loam
15 to 19 inches, dark yellowish brown fine sandy loam with few mottles

Substratum:
19 to 35 inches, brown gravelly loam with many mottles
35 to 72 inches, brown gravelly loam with few mottles

Included with this soil in mapping are about 10 percent somewhat poorly drained Malone soils on nearly level areas and along drainageways. About 5 percent of this unit are small areas of somewhat poorly drained Coveytown soils with a sandy mantle, and soils similar to Muskellunge and Hailesboro having silt and clay overlying a loamy substratum. Small inclusions of Kalurah soils occur in areas where the soil is slightly more acid in the subsoil and substratum. Also included are soils similar to Neckrock soils with bedrock less than 60 inches deep. In some areas, the surface texture is fine sandy loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface, subsoil, and upper substratum; and moderately slow in the lower substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: perched 18 to 24 inches deep at some time during March through May
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as cropland. This soil qualifies as prime farmland in Clinton County.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table may delay farming operations after periods of heavy precipitation. Installation of drainage, especially in somewhat poorly drained inclusions, will aid in the efficiency of farm operations. Conservation tillage systems, crop rotations, and the use of cover crops are good management practices.

This soil is well suited to pasture. The seasonal high water table during the early spring may cause muddy barnyards and stunted forage growth in some areas of this soil. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major limitations for woodland management on this soil.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A slightly higher area in the landscape would likely be a better site for dwellings. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Designing new roads with coarse-grained subgrade material will help alleviate potential frost damage. Adequate surface and subsurface drainage in areas of the somewhat poorly drained inclusions will also decrease the potential for frost action.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the moderately slow permeability in the substratum. A better suited site should be considered for this use. If this soil is used, higher spots within the map unit would likely perform better for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless supplemental drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness.

The capability subclass is 2w.

HoB—Hogansburg loam, 3 to 8 percent slopes

This very deep, gently sloping, and moderately well drained soil occurs on undulating glacial till lowlands.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 10 inches, very dark grayish brown loam

Subsoil:
10 to 15 inches, brown loam
15 to 19 inches, dark yellowish brown fine sandy loam with few mottles

Substratum:
19 to 35 inches, brown gravelly loam with many mottles
35 to 72 inches, brown gravelly loam with few mottles

Included with this soil in mapping are about 5 percent well drained Grenville soils on slightly more convex positions and areas near steeper slopes. About 5 percent of this unit includes somewhat poorly drained Malone soils on slightly concave or nearly level areas (fig. 15). Small inclusions of Kalurah soils occur in areas where the soil is slightly more acid in the subsoil and substratum. Also included are soils similar to Neckrock soils with bedrock less than 60 inches deep. Small areas of very stony surface conditions occur near pastures and woodlots. In some areas, the surface texture is fine sandy loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface, subsoil, and upper substratum; and moderately slow in the lower substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: perched 18 to 24 inches deep at some time during March through May
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as cropland. This soil qualifies as prime farmland in Clinton County.

This soil is well suited to growing cultivated crops and hay. Erosion can be a serious management problem on long slopes planted to row crops, eventually reducing productivity. Care should be taken when cultivating by proceeding along the contour of the land. Conservation tillage systems, crop rotation, and the use of cover crops are good management practices.

Figure 15. —A typical landscape representing both glacial lake deposits and glacial till. Gently sloping Hogansburg soils (in the foreground) are partly protected by corn residue from soil erosion. On the low ridge with a building (in the background), Malone, Hogansburg, and Grenville soils represent another loamy till landform. Between these higher areas, the nearly level Muskellunge silty clay soil occurs.

This soil is well suited to pasture. Erosion can be a management problem on long slopes subject to heavy grazing. Overgrazing should be avoided. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major limitations for woodland management on this soil.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as inclusions of Grenville soils or a higher nearby area. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Designing new roads with coarse-grained subgrade material will help alleviate potential frost damage. Adequate surface and subsurface drainage in critical somewhat poorly drained areas will also decrease the potential for frost action.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the moderately slow permeability in the substratum. A better suited site should be considered for this use. If this soil is used, higher spots within the map unit would likely perform better for this use. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods

of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness.

The capability subclass is 2e.

HrB—Hogansburg loam, gently sloping, very stony

This very deep and moderately well drained soil occurs on undulating glacial till lowlands. Large stones cover up to 3 percent of the soil surface. Slopes range from 0 to 8 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 10 inches, very dark grayish brown loam

Subsoil:
10 to 15 inches, brown loam
15 to 19 inches, dark yellowish brown fine sandy loam with few mottles

Substratum:
19 to 35 inches, brown gravelly loam with many mottles
35 to 72 inches, brown gravelly loam with few mottles

Included with this soil in mapping are about 5 percent well drained Grenville soils on slightly more convex positions and areas near steep slopes. About 5 percent of this unit are somewhat poorly drained Malone soils on slightly concave or nearly level areas. Small inclusions of Kalurah soils occur in areas where the soil is slightly more acid in the subsoil and substratum. Also included are soils similar to Neckrock soils with bedrock less than 60 inches deep. In some areas, the surface was not stony and texture is fine sandy loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface, subsoil, and upper substratum; moderately slow in the lower substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: perched 18 to 24 inches deep at some time during March through May
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland. A few areas are used as pasture.

This soil is poorly suited to growing cultivated crops and hay. Tillage with conventional farm equipment is impractical because of large surface stones resulting in substantial wear or damage to the farm equipment. Stone removal will be necessary in most areas of this unit before cultivation. Conservation tillage systems, crop rotation, and the use of cover crops are good management practices.

This soil is moderately suited to pasture. The presence of large surface stones can negatively affect the quality and quantity of forage and inhibit yearly mowing and other maintenance practices. Stone removal, rotational grazing, yearly mowing, and proper stocking rates are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major limitations for woodland management for this soil.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as included Grenville soils

or a higher nearby area. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Designing new roads with coarser grained subgrade material will help alleviate potential frost damage. Adequate surface and subsurface drainage in critical somewhat poorly drained areas will also decrease the potential for frost action.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the moderately slow permeability in the substratum. A better suited site should be considered for this use. If this soil is used, higher spots within the map unit would likely perform better for this use. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness.

The capability subclass is 6s.

InB—Irona-Conic complex, gently sloping, very rocky

This unit consists of well drained soils overlying sandstone bedrock on ridges and benches. The shallow Irona soils are generally on shoulders of slopes and on benches. The moderately deep Conic soils are generally on broad ridgetops and benches and on mid-slope positions. Exposed bedrock covers 2 to 10 percent of the surface of the unit. This unit consists of about 40 percent Irona soils, 35 percent Conic soils, and 25 percent other soils. The Irona and Conic soils are so intermingled that it was not practical to map them separately. Slopes range from 3 to 15 percent, but is dominantly 3 to 8 percent.

The typical sequence, depth, and composition of the layers of Irona soils are as follows—

Surface layer:
0 to 5 inches, dark brown fine sandy loam

Subsoil:
5 to 13 inches, dark yellowish brown fine sandy loam

Substratum:
13 to 18 inches, yellowish brown sandy loam
18 inches, light gray unweathered sandstone bedrock

The typical sequence, depth, and composition of the layers of Conic soils are as follows—

Surface layer:
2 inches, thick layer of leaves and grasses
0 to 1 inch, black highly decomposed remains of grasses, roots and leaves

Subsurface layer:
1 to 4 inches, brown fine sandy loam

Subsoil:
4 to 14 inches, brown fine sandy loam
14 to 23 inches, strong brown gravelly fine sandy loam

Substratum:
23 to 37 inches, brown gravelly fine sandy loam with common mottles
37 inches, light gray unweathered sandstone bedrock

Included with this unit in mapping are about 10 percent somewhat poorly drained, shallow Topknot and moderately deep Chazy soils and very poorly drained, very deep Runeberg soils in slight depressions and along drainageways. About 3 percent of this unit consists of soils similar to very deep Schroon and Kalurah soils on footslopes. Small areas of somewhat poorly drained Peasleeville soils are along toeslopes and near drainageways. Small areas of very shallow soils are included near rock outcrops. Also, similar soils having redder colors are included in the Rand Hill and Chazy Lake areas of the county. Finally, included are small areas with slope greater than 15 percent and very gravelly spots. Inclusions make up about 25 percent of this unit and range up to 5 acres each.

Soil Properties of the Irona soils—

Permeability: moderate throughout the mineral soil
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock depth
Shrink-swell potential: low
Depth to bedrock: 10 to 20 inches

Soil Properties of the Conic soils—

Permeability: moderate in the mineral surface and subsoil; and slow in the dense substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Most areas of this soil are used for woodland or brushland. Some areas are used for pasture or hay.

This unit is poorly suited to cultivated crops and hay. Rock outcrops and shallow depth to bedrock make management of this unit difficult, and may cause excessive wear on machinery. Erosion can be a serious problem, especially on shallow Irona soils, resulting in significant loss of crop productivity. Maintaining vegetative cover on this unit will help conserve topsoil. Conservation tillage and crop rotation are also good practices.

This unit is poorly suited to pasture. Rock outcrops may interfere with equipment use limiting pasture improvements and management. Erosion is a serious management concern on heavily traveled areas of this soil. Overgrazing should be avoided to maintain the presence of key pasture species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this unit is moderate. Seedling mortality is a management concern especially on Irona soils because of the very low available water capacity. Selecting varieties which are tolerant of dry soil conditions and planting in the spring while the soil is moist are ways to improve seedling survival. Due to shallow to bedrock conditions, there is a risk of windthrow resulting from limited rooting depth. Minimal clearcutting will help alleviate windthrow.

The main limitation if this unit is used as a site for dwellings is the depth to bedrock. Inclusions of deeper soils such as Schroon or Kalurah may be better suited. Dwellings with basements are generally built on top of bedrock and landscaped with additional fill.

The main limitation if this unit is used as a site for local roads and streets is the depth to bedrock. Where rock is encountered, blasting will be necessary to allow for

proper grading and smoothing. Planning road grades and locations to avoid shallow to bedrock areas will help minimize construction costs.

The main limitation if this unit is used as a site for septic tank absorption fields is depth to bedrock. A better suited site such as deeper nearby soils should be considered for this use. If this unit is used, alternative designs that increase the absorptive and filtering capacity of the system will be needed. There is a possibility of septic effluent seeping over bedrock into nearby water supplies.

The main limitation if this unit is used as a site for shallow excavations is the depth to bedrock. Digging will be difficult because of the hardness of bedrock and generally necessitates blasting. Selecting deeper inclusions or nearby soils where possible will facilitate excavations and lower expenses.

The capability subclass is 6s.

Jn—Junius fine sand

This very deep and somewhat poorly drained soil occurs on nearly level sandy lake plains. Slopes range from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown fine sand

Subsoil:
9 to 18 inches, light olive brown fine sand with common mottles
18 to 29 inches, yellowish brown fine sand with common mottles
29 to 46 inches, light gray fine sand with common mottles

Substratum:
46 to 56 inches, gray very fine sand and fine sand with many mottles
56 to 59 inches, gray loamy very fine sand with silt lenses and common mottles
59 to 72 inches, dark gray loamy very fine sand with few mottles

Included with this soil in mapping are about 5 percent moderately well drained Deerfield soils on slightly higher positions within the unit. About 5 percent of this unit are poorly drained Gougeville soils along drainageways and in basin-like areas. Small areas of somewhat poorly drained Pipestone soils are included where the subsoil is reddish brown. Also included are small areas of moderately well drained Covertfalls soils and somewhat poorly drained Northway soils where a loamy substratum occurs. In some areas, the surface texture is fine sandy loam or loamy fine sand. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid in the mineral surface; and rapid in the subsoil and substratum
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: 12 to 18 inches deep at some time from December through May
Root zone: mainly to 18 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as hayland and pasture.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and after heavy rainfall. Surface and

subsurface drainage will help to improve the efficiency of farm operations and increase crop yield. Conservation tillage systems, crop rotation, and maintenance of existing waterways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table can cause significant wetness problems in barnyards and heavily traveled areas of the pasture. Forage plants may be stunted during the early growing season because of wetness. Deferred grazing, rotational grazing, proper stocking rates, maintaining surface drainage, and yearly mowing are good management practices.

The potential productivity for growing red maple on this soil is moderate. Because of the seasonal high water table, soft ground conditions pose a moderate limitation on heavy equipment use. Seedling mortality and windthrow are also management concerns because of restricted root growth in this soil.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area nearby. Foundation drains and protective coatings on basement walls will alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The seasonal high water table and frost action are moderate limitations if this soil is used as a site for local roads and streets. Roads constructed on coarse-grained fill material having adequate drainage will generally be more durable and stable.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the soil's poor filtering ability. A better suited site should be considered for this use. Nearby, higher positions will likely perform better for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered. Because of rapid permeability, there is a possibility of ground water contamination.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the soil's tendency to cave in. Digging operations may be limited to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area will also occur because of wetness and the sandy textures. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 3w.

KhB—Kalurah fine sandy loam, 3 to 8 percent slopes

This very deep, gently sloping, and moderately well drained soil is on slightly convex or undulating slopes of glacial till lowlands.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, very dark grayish brown fine sandy loam

Subsoil:
8 to 16 inches, brown fine sandy loam
16 to 27 inches, dark yellowish brown gravelly fine sandy loam with few mottles
27 to 45 inches, brown gravelly fine sandy loam with common mottles.

Substratum:
45 to 72 inches, dark grayish brown gravelly loam with common mottles

Included with this soil in mapping are about 5 percent well drained Grenville and Bice soils on higher positions in the unit. About 5 percent of this unit consist of somewhat poorly drained Malone soils and very poorly drained Runeberg soils along

drainageways and in basin-like areas. Small areas of shallow Irona and moderately deep Conic soils are on benches and high areas where bedrock is less than 40 inches deep. Very stony Kalurah soils are included in woodlots and other uncleared areas. In some areas, the surface texture is sandy loam or loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface layer, moderately slow in the subsoil, and slow in the substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: 18 to 24 inches deep at some time during November through May
Root zone: mainly to 28 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as cropland or hay. This soil meets the requirements of prime farmland in Clinton County.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table may delay farm operations after periods of heavy rain. Drainage systems will aid in the efficiency of farm operations especially when routed through somewhat poorly drained inclusions. Conservation tillage systems, crop rotation, stripcropping, and the use of cover crops are good management practices.

This soil is well suited to pasture. Grazing can cause compaction and loss of desirable forage when timed with wet soil conditions. Deferred grazing, rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major limitations for woodland management on this soil.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. Foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Road designs recommending coarser grained subgrade material will help reduce the potential for frost action. Adequate drainage will also help minimize frost action.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the slow percolation rate. Well drained nearby soils may be better suited for this use. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations during wet or rainy periods may be delayed unless drainage is installed.

The capability subclass is 2e.

KlB—Kalurah fine sandy loam, gently sloping, very stony

This very deep and moderately well drained soil is on slightly convex or undulating areas on glacial till lowlands. Stones cover up to 3 percent of the surface. Slopes range from 3 to 8 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface:
0 to 8 inches, very dark grayish brown fine sandy loam

Subsoil:
8 to 16 inches, brown fine sandy loam
16 to 27 inches, dark yellowish brown gravelly fine sandy loam with few mottles
27 to 45 inches, brown gravelly fine sandy loam with common mottles

Substratum:
45 to 72 inches, dark grayish brown gravelly loam with common mottles

Included with this soil in mapping are about 5 percent well drained Grenville and Bice soils on higher positions in the unit. About 5 percent of this unit consist of somewhat poorly drained Malone soils and very poorly drained Runeberg soils along drainageways and in concave areas. Small areas of shallow Irona and moderately deep Conic soils are on benches and high areas where bedrock is less than 40 inches deep. Kalurah soils that are not stony are also included. In some areas, the surface texture is sandy loam or loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface layer, moderately slow in the subsoil, and slow in the substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: 18 to 24 inches deep at some time during November through May
Root zone: mainly to 28 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland or brushland. Some areas are used for pasture.

This soil is poorly suited to growing cultivated crops and hay. Large surface stones will obstruct effective management and also cause excessive wear on machinery. Stone clearing is necessary to accommodate most farm operations. In addition to stone removal, conservation tillage, crop rotation, and use of cover crops are also good management practices.

This soil is poorly suited to pasture. Large surface stones inhibit yearly mowing and other maintenance practices. Overgrazing may increase competition from weeds and subsequent loss of desired forage plants. Stone removal, rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major limitations for woodland management on this soil.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. Foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Road designs recommending coarser grained subgrade material will help reduce the potential for frost action. Adequate surface and subsurface drainage will also help minimize frost action.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the slow percolation rate. Well drained nearby soils may be better suited for this use. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations during wet periods may be delayed unless drainage is installed.

The capability subclass is 6s.

Kr—Kingsbury-Rhinebeck complex

This very deep, nearly level, or level, and somewhat poorly drained map unit occurs on flat or slightly undulating lake plains. Kingsbury soils have more clay (greater than 60 percent by volume) than Rhinebeck soils. This unit consists of about 45 percent Kingsbury soils, 40 percent Rhinebeck soils, and 15 percent other soils. The Kingsbury and Rhinebeck soils are so intermingled that it was not practical to map them separately. Slopes range from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of the Kingsbury soil are as follows—

Surface layer:
0 to 8 inches, very dark gray silty clay loam

Subsurface layer:
8 to 11 inches, grayish brown silty clay with many mottles

Subsoil:
11 to 22 inches, dark grayish brown clay with many mottles
22 to 32 brown and dark grayish brown clay with many mottles

Substratum:
32 to 53 inches, dark grayish brown silty clay with many mottles
53 to 62 inches, grayish brown silty clay with common mottles
62 to 72 inches, dark grayish brown silty clay with common mottles

The typical sequence, depth, and composition of the layers of the Rhinebeck soil are as follows—

Surface layer:
0 to 8 inches, very dark grayish brown silty clay loam

Subsoil:
8 to 17 inches, dark grayish brown silty clay with common mottles
17 to 25 inches, brown silty clay with common mottles
25 to 31 inches, dark grayish brown silty clay with many mottles

Substratum:
31 to 51 inches, dark grayish brown silty clay loam with few mottles
51 to 72 inches, dark grayish brown varved silty clay loam, silt loam, and very fine sandy loam with common mottles

Included with this unit in mapping are about 5 percent soils similar to poorly drained Adjidaumo soils along drainageways and in slight depressions. About 5 percent of this unit includes somewhat poorly drained Massena soils and soils similar to Roundabout soils. Massena soils were formed in loamy glacial till, and have more rock fragments throughout the profile. Roundabout soils have less clay and more silt throughout the profile. Also, included in this unit are moderately deep to bedrock Gardenisle soils, and somewhat poorly drained Shaker soils which have a loamy surface mantle. In some areas, there are inclusions similar to Rhinebeck soils with a loamy substratum. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties of the Kingsbury soils—

Permeability: slow in the surface layer, and very slow in the subsoil and substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 12 to 18 inches deep at some time during December through May
Root zone: mainly to 18 inches deep
Shrink-swell potential: moderate in the surface, and high in the subsoil and substratum
Depth to bedrock: greater than 60 inches

Soil Properties of the Rhinebeck soils—

Permeability: moderately slow in the surface, and slow in the subsoil and substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 12 to 18 inches deep at some time during January through May
Root zone: mainly to 18 inches deep
Shrink-swell potential: moderate
Depth to bedrock: greater than 60 inches

Most areas of this unit are used for hayland or brushland.

This unit is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and harvest in the fall. Surface and subsurface drainage can help improve the efficiency of farm operations and increase crop yield. Because of slow permeability in the subsoil and substratum, the potential for pesticide and nutrient loss from runoff on this unit is high. Conservation tillage systems, crop rotation, and maintenance of waterways are good management practices.

This unit is moderately suited to pasture. The seasonal high water table can cause significant wetness problems in heavily traveled areas of the pasture, especially in the spring. Forage plants may show stunted growth during the early part of the growing season as a result of wetness. Deferred grazing, rotational grazing, proper stocking rates, surface drainage, and yearly mowing are good management practices.

The potential productivity for growing red maple is moderate. Because of the seasonal high water table, soft ground conditions create moderate limitations for heavy equipment use. Species that are tolerant to wet conditions are best for planting on this unit.

The main limitation if this unit is used as a site for dwellings is the seasonal high water table. A better suited site on a nearby, higher area will likely have less wetness problems. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling. Building design should compensate for some shrinking and swelling of soil around foundations and basements.

The main limitations if this unit is used as a site for local roads and streets are frost action, low soil strength, and the seasonal high water table. Construction plans should call for providing coarser grained subgrade material. Adequate surface and subsurface drainage in critical areas will also decrease the potential for frost action and wetness.

The main limitations if this unit is used as a site for septic tank absorption fields are the seasonal high water table and the very slow permeability. A better suited site should be considered for this use. Conventional septic system designs will perform poorly on this unit. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this unit is used as a site for shallow excavations is the seasonal high water table. Also, the presence of varves in the substratum presents the possibility of cutbanks caving in. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness. Mechanical support of trench walls will help prevent possibility of the soil caving in on workers.

The capability subclass is 3w.

Ld—Lovewell very fine sandy loam, stratified substratum

This very deep, nearly level, and moderately well drained soil is on flood plains of large perennial streams that occasionally flood for brief periods. Slopes range from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 11 inches, dark brown very fine sandy loam

Subsoil:
11 to 20 inches, yellowish brown very fine sandy loam
20 to 30 inches, yellowish brown very fine sandy loam with common mottles

Substratum:
30 to 50 inches, light brownish gray very fine sandy loam with many mottles
50 to 56 inches, grayish brown fine sand with many mottles
56 to 75 inches, gray fine sand with many mottles

Included with this soil in mapping are about 5 percent somewhat poorly drained Cornish soils and very poorly drained Medomak soils in slightly concave areas and near tributaries. Also included are about 5 percent soils that are similar to Adams, Croghan or Colton soils on slightly higher positions that rarely flood. Some areas of the Saranac River flood plains have higher sand and rock fragment content than along other rivers in Clinton County. About 5 percent of this map unit is well drained loamy soil on more convex positions. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface, subsoil and upper substratum; and rapid in the lower substratum below 50 inches
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 18 to 36 inches deep at some time from November through May
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for corn or hay. This soil meets the requirements for prime farmland.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table may delay planting during early spring or after heavy rainfall. Installation of drainage, especially in somewhat poorly drained inclusions, will aid efficiency of farm operations. Conservation tillage systems and crop rotations are good management practices.

This soil is well suited to pasture. The seasonal high water table during early spring can cause muddy barnyards and less forage density in some areas of this soil.

Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is very high. Although there are no major management limitations, brush control is important to subdue plant competition around seedlings. Also, there is a moderate windthrow hazard because of root restriction above the seasonal high water table.

The main limitations if this soil is used as a site for dwellings with basements are the seasonal high water table and the common flooding potential. A better suited site should be considered such as soil on a higher nearby area.

The main limitation if this soil is used as a site for local roads and streets are flooding and potential frost action. Roads should be routed around these flood prone areas where possible. Providing a coarse-grained subgrade may reduce flood damage and frost action.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, the potential for flooding, and the poor filtering capacity in the lower, sandier substratum. A better suited site should be considered for this use such as a higher nearby area not prone to flooding.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the tendency for the soil to cave in. Digging operations may be restricted to drier periods of the year. Sloughing of soil in the excavated area may also occur because of wetness. The banks of the excavation should be mechanically supported to avoid the possibility of soil caving in on workers or other possible victims.

The capability subclass is 2w.

Le—Loxley mucky peat

This very deep, nearly level, very poorly drained soil formed in thick organic deposits. It occurs in depressions and within broad valleys near slow flowing streams. Slopes range from 0 to 2 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 16 inches, very dark brown mucky peat

Subsurface layer:
16 to 34 inches, very dark brown muck

Bottom layer:
34 to 72 inches, very dark brown muck

Included with this soil in mapping are about 10 percent very poorly drained Beseman soils in areas of moderately deep organic deposits. About 3 percent of this unit consists of very poorly drained Medomak soils formed in loamy sediments on floodplains. Also included are small areas of very poorly drained Searsport and Sabattis soils formed in mineral deposits near margins of this unit. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate or moderately rapid in the surface layer, moderately slow to moderately rapid below
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 12 inches above the soil surface to 12 inches below the surface from November through July
Root zone: mainly to 12 inches deep

Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland or bogs.

This soil, in its natural condition, is not suited to growing cultivated crops and hay because of the seasonal high water table. The surface is ponded during much of the year, including a substantial part of the growing season. Drainage would be expensive to install and maintain, and would adversely affect fragile wetland areas.

This soil, in its natural condition, is not suited to pasture. The seasonal high water table is near the surface or covers the surface during most of the year. Areas of this soil will not support typical pasture plant species. Ground conditions are generally too soft to support livestock traffic without substantial damage to vegetation.

The potential productivity for growing black spruce on this soil is moderate. However the low bearing strength of this soil will not support heavy timber harvesting equipment. Because of the high water table, seedling mortality is severe except for water tolerant species. The shallow rooting depth of this soil creates a severe windthrow hazard. Establishing water tolerant species and keeping tree harvest to a minimum will help prevent excessive windthrow.

The main limitations if this soil is used as a site for dwellings are the seasonal high water table, low soil strength, and potential for subsidence. Better suited soils should be considered for dwelling sites.

The main limitations if this soil is used as a site for local roads and streets are the seasonal high water table, potential frost action, and potential subsidence. Nearby, better drained soils should be considered for new road locations. Constructing roads on raised coarse grained fill material and providing adequate drainage will help alleviate problems due to wetness and frost action. Removal of organic material before filling will reduce the potential of subsidence and subsequent damage to the road surface.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, slow percolation rate, and the potential for subsidence. A better suited site should be considered for this use. The high water table and prolonged ponding on this soil create a severe risk of effluent seepage into surface or ground water if this soil is used for septic tank absorption fields.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and excess humus. Digging operations will be restricted to the driest periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness and the high organic matter content. Mechanical support of trench walls is important for providing a safer work environment.

The capability subclass is 7w, undrained and 4w, drained.

LtF—Lyman-Tunbridge-Rock outcrop complex, very steep

This unit consists of somewhat excessively drained to well drained, shallow and moderately deep soils. The Lyman soils were formed in shallow deposits of loamy glacial till on ridgetops and other areas near bedrock outcropping. The Tunbridge soils formed in moderately deep deposits of loamy glacial till on hillsides. This unit consists of about 50 percent Lyman soils, 30 percent Tunbridge soils, about 10 percent rock outcrops and about 10 percent other soils. Large boulders cover up to 3 percent of the soil surface. The Tunbridge and Lyman soils are so intermingled that it was not practical to map them separately. Slopes range from 35 to 70 percent.

The typical sequence, depth, and composition of the layers of the Lyman soil are as follows—

Surface layer:
0 to 3 inches, black decomposed leaves and twigs

Subsurface layer:
3 to 6 inches, reddish gray fine sandy loam

Subsoil:
6 to 13 inches, dark reddish brown fine sandy loam
13 to 17 inches, reddish brown gravelly fine sandy loam
17 inches, crystalline bedrock

The typical sequence, depth, and composition of the layers of the Tunbridge soil are as follows—
Surface layer:
0 to 1 inch, very dark brown fine sandy loam

Subsurface layer:
1 to 4 inches, reddish brown fine sandy loam

Subsoil:
4 to 9 inches, reddish brown gravelly loam
9 to 16 inches, yellowish red loam
16 to 26 inches, brown gravelly fine sandy loam
26 inches, crystalline bedrock

Included with this unit in mapping are about 5 percent very deep Monadnock soils between ridgetops and along side slopes. About 5 percent of this unit includes very shallow Ricker soils, and areas of bedrock escarpments and colluvium. Included areas make up about 10 percent of this unit and range up to 5 acres each.

Soil Properties of the Lyman soils—

Permeability: moderately rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 10 to 20 inches

Soil Properties of the Tunbridge soils—

Permeability: moderate or moderately rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Most areas of this unit are in woodland.

This unit is not suited to growing cultivated crops and hay because of the very steep slopes and bedrock outcrops.

This unit is not suited to pasture because of the very steep slopes. Erosion is a serious management concern on pastured areas of this unit. Droughtiness will limit forage production during most of the grazing season because of the low available water capacity.

The potential productivity for growing red spruce on areas of Lyman soils is high. The potential productivity for growing sugar maple is moderate on the Tunbridge part of this unit. Erosion is severe and difficult to manage in most areas. Because of very

steep terrain, the use of harvesting equipment will be risky. Windthrow is also inherent within this map unit because of restricted root growth.

The main limitations if this unit is used as a site for dwellings are very steep slopes and depth to bedrock. A better suited site should be considered for this use.

The main limitations if this unit is used as a site for local roads and streets are steep slopes and shallow depth to bedrock. Routing new roads around this unit or along the contour will help minimize construction costs.

The main limitations if this unit is used as a site for septic tank absorption fields are very steep slope and depth to bedrock. A better suited site should be considered for this use.

The main limitations if this unit is used as a site for shallow excavations are the very steep slope and shallow depth to bedrock. Maneuvering excavation equipment on these slopes will be very risky. Blasting bedrock will be necessary in most areas of this unit. Excavations should be routed through deeper and less sloping nearby soils where possible.

The capability subclass is 7s.

Lv—Lyonmounten loam

This very deep and poorly drained soil is on flat or slightly concave areas of upland glacial till plains. Slopes range from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown loam with common mottles

Subsurface layer:
9 to 17 inches, light brownish gray loam with common mottles

Subsoil:
17 to 24 inches, grayish brown loam with many mottles
24 to 34 inches, light brownish gray gravelly loam with many mottles
34 to 41 inches, variable gray, yellowish brown and light olive brown gravelly loam

Substratum:
41 to 49 inches, light olive brown gravelly loam with common mottles
49 to 72 inches, light olive brown gravelly loam with few mottles

Included with this soil in mapping are about 5 percent somewhat poorly drained Adirondack and Peasleeville soils on slightly higher areas of the map unit. About 5 percent of this unit consists of very poorly drained Sabattis and Runeberg soils in depressions and near drainageways. Also included are about 5 percent somewhat poorly drained Malone soils in high lime areas. Small areas of sandy Cook soils and silty Roundabout soils are included near lake plains. Fluvaquents and very poorly drained Medomak soils are included in flood-prone areas in units adjacent to streams. Inclusions of very stony soils are often in small areas of brush or woodland. Small areas that are moderately deep to bedrock are also included. Included soils make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the mineral surface layer, and moderate or moderately slow in the subsoil and substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: at the surface to 6 inches deep at some time from November through May

Root zone: mainly to 12 inches deep
Shrink swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in pasture or brush.

This soil is poorly suited to growing cultivated crops and hay. Without adequate drainage, the seasonal high water table will delay planting in the spring and harvesting in the fall. Surface and subsurface drainage can improve the efficiency of farm operations. Because of nearly level topography, it may be difficult to establish outlets without damaging adjacent wetland habitat. Conservation tillage systems, crop rotation, maintenance of existing drainageways, and use of cover crops are good management practices.

This soil is poorly suited to pasture. The seasonal high water table may limit the growth of forage plants in the spring. Selecting plants which are tolerant of wet soil conditions will help sustain the quality and quantity of forage. Excessive grazing on this soil while the ground is wet increases the potential for compaction and loss of desired plant species. Rotational grazing, deferred grazing, proper stocking rates, maintenance of existing drainageways, and yearly mowing are good management practices.

The potential productivity for growing red maple on this soil is moderate. Maneuvering heavy harvesting equipment may be difficult during wet periods. Rooting depth is limited by the seasonal high water table, which may result in windthrow in some areas of this soil. Selecting species tolerant of wet soil conditions will help increase seedling survival and reduce windthrow.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. Better drained soils on higher nearby areas should be considered for this use. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water from higher areas by carrying it away from the dwelling.

The main limitations if this soil is used as a site for local roads and streets are frost action and the seasonal high water table. Constructing roads on a raised bed of coarse grained material and providing adequate surface and subsurface drainage will decrease the potential damage from frost action and wetness.

The main limitations if this soil is used as a site for septic tank absorption fields is the seasonal high water table. A better suited site should be considered for this use. If this soil is used, an alternative design that augments the absorptive and filtering capacity of the system will be needed.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless drainage is installed.

The capability subclass is 4w, undrained and 3w, drained.

Ly—Lyonmounten loam, very stony

This very deep and poorly drained soil is on flat and slightly concave areas of upland glacial till plains. Large stones cover up to 3 percent of the soil surface. Slopes range up to 8 percent, but are dominantly 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown loam with common mottles

Subsurface layer:
9 to 17 inches, light brownish gray loam with common mottles

Subsoil:
17 to 24 inches, grayish brown loam with many mottles
24 to 34 inches, light brownish gray gravelly loam with many mottles
34 to 41 inches, variable gray, yellowish brown and light olive brown gravelly loam

Substratum:
41 to 49 inches, light olive brown gravelly loam with common mottles
49 to 72 inches, light olive brown gravelly loam with few mottles

Included with this soil in mapping are about 5 percent somewhat poorly drained Adirondack and Peasleeville soils on slightly higher areas of the map unit. About 5 percent of this unit consist of very poorly drained Sabattis and Runeberg soils in depressions and near drainageways. Also included are about 5 percent somewhat poorly drained Malone soils in high lime deposits. Small areas of sandy Cook soils and silty Roundabout soils are included near lake plains. Fluvaquents and very poorly drained Medomak soils are included in flood-prone areas in units adjacent to streams. Inclusions of non-stony soils are often in small cleared areas. Small areas that are moderately deep to bedrock are also included. Included soils make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the mineral surface layer, and moderate or moderately slow in the subsoil and substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: at the surface to 6 inches deep at some time from November through May
Root zone: mainly to 12 inches deep
Shrink swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland or brush.

This soil is poorly suited to growing cultivated crops and hay. Large surface stones obstruct effective management and cause excessive wear on machinery. The seasonal high water table will delay farm operations in the spring and after periods of rain. Stone clearing, conservation tillage systems, and the use of cover crops are good management practices.

This soil is poorly suited to pasture. Large surface stones inhibit yearly mowing and other maintenance practices. The seasonal high water table causes muddy conditions in barnyards and pastures, especially in the spring. Overgrazing may lead to surface compaction during wet periods and loss of desired forage plants. Stone removal, deferred grazing, rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing red maple on this soil is moderate. Maneuvering heavy harvesting equipment may be difficult during wet periods. Rooting depth is limited by the seasonal high water table, resulting in windthrow in some areas of this soil. Selecting species tolerant of wet soil conditions will help increase seedling survival and reduce windthrow.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. Better drained soils on higher nearby areas should be considered for this use. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water from higher areas by carrying it away from the dwelling.

The main limitations if this soil is used as a site for local roads and streets are frost action and the seasonal high water table. Constructing roads on a raised bed of coarse grained material and providing adequate surface and subsurface drainage will decrease the potential damage from frost action and wetness.

The main limitation if this soil is used as a site for septic tank absorption fields is the seasonal high water table. A better suited site should be considered for this use. If this soil is used, an alternative design that augments the absorptive and filtering capacity of the system will be needed.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless drainage is installed.

The capability subclass is 6s.

MaB—Madrid fine sandy loam, 3 to 8 percent slopes

This very deep, gently sloping, and well drained soil is on the tops of hills and other convex slopes on glacial till lowlands.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 6 inches, very dark grayish brown fine sandy loam

Subsurface layer:
6 to 14 inches, brown fine sandy loam
14 to 20 inches, pale brown fine sandy loam

Subsoil:
20 to 42 inches, brown gravelly loam

Substratum:
42 to 72 inches, grayish brown gravelly fine sandy loam

Included with this soil in mapping are about 5 percent moderately well drained Bombay soils on the lower margins of slopes and in undulating areas. About 5 percent of this unit are excessively drained Grattan soils and moderately well drained Covert soils which are sandy soils. This unit also contains small areas of somewhat poorly drained Pipestone and Appleton soils occurring near swales and along drainageways. Also in this unit are small areas of a soil similar to Grattan soils but having a loamy substratum. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the mineral surface and subsurface, moderate or moderately slow in the subsoil, and moderately slow in the substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: greater than 72 inches deep
Root zone: mainly to 30 inches deep
Shrink-swell potential: low
Depth to bedrock: greater then 60 inches

Most areas of this soil are used for hay or crops. This soil meets the requirements for prime farmland.

This soil is well suited to growing cultivated crops and hay. Erosion may reduce soil productivity especially on long slopes. Cultivating along the contour of the landscape can decrease the erosion rate. Conservation tillage systems, crop rotation, stripcropping, and the use of cover crops are good management practices.

This soil is well suited to pasture. Erosion can be a management problem particularly on long slopes subject to heavy grazing. Overgrazing should be avoided. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is high. There are no major limitations for woodland management on this soil.

There are no major limitations for dwellings on this soil.

The main limitation if this soil is used as a site for local roads and streets is frost action. Providing a coarse grained subgrade material will help reduce the frost action below road pavement.

The main limitation if this soil is used as a site for septic tank absorption fields is the moderately slow permeability rate in the substratum. A better suited site with moderate or moderately rapid permeability throughout the soil profile should be considered. Conventional septic system designs may perform poorly on this soil. Alternative systems that augment the filtering capacity of this system should be considered.

There are no major limitations on this soil for shallow excavations.

The capability subclass is 2e.

MaC—Madrid fine sandy loam, 8 to 15 percent slopes

This very deep, strongly sloping, and well drained soil is near the tops of hills and other convex slopes on glacial till lowlands.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 6 inches, very dark grayish brown fine sandy loam

Subsurface layer:
6 to 14 inches, brown fine sandy loam
14 to 20 inches, pale brown fine sandy loam

Subsoil:
20 to 42 inches, brown gravelly loam

Substratum:
42 to 72 inches, grayish brown gravelly fine sandy loam

Included with this soil in mapping are about 5 percent moderately well drained Bombay soils on the lower margins of slopes and in undulating areas. About 5 percent of this unit are the sandier Grattan and Occur soils occupying similar positions. This unit also contains small areas of somewhat poorly drained Appleton soils near swales and along drainageways. Also in this unit are small areas of a soil similar to Grattan but having a loamy substratum and moderately steep slopes. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the mineral surface and subsurface, moderate or moderately slow in the subsoil, and moderately slow in the substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: greater than 72 inches deep
Root zone: mainly to 30 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for hayland or brush.

This soil is moderately suited to growing cultivated crops and hay. Erosion is commonly a concern especially on long slopes and areas planted to row crops. Future crop productivity may be reduced by subsequent loss of valuable topsoil. Cultivating along the contour of the land will decrease the erosion potential.

Conservation tillage systems, crop rotation, stripcropping, and the use of cover crops are good management practices.

This soil is moderately suited to pasture. Erosion can be a significant management problem on heavily grazed areas of this soil. Overgrazing should be avoided to reduce soil erosion and encourage key plant species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is high. There are no major limitations for woodland management on this soil.

The main limitation if this soil is used as a site for dwellings is slope. This strongly sloping unit may require some grading and landscaping expenses. Desiging the dwelling to conform to the natural slope of the land can minimize the slope limitation.

The main limitations if this soil is used as a site for local roads and streets are slope and the potential for frost action. Constructing roads along the contour will reduce the slope limitation. Providing a coarse-grained subgrade will diminish frost action beneath road pavement.

The main limitation if this soil is used as a site for septic tank absorption fields is the moderately slow permeability rate. A better suited site with moderate or moderately rapid permeability should be considered. Conventional septic system designs may perform poorly on this soil. Alternative systems that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is slope. Maneuvering equipment over this soil may be risky in places.

The capability subclass is 3e.

MeA—Malone gravelly loam, 0 to 3 percent slopes

This very deep, nearly level, and somewhat poorly drained soil occurs on smooth and slightly concave glacial till plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown gravelly loam

Subsoil:
9 to 30 inches, brown gravelly fine sandy loam with many mottles

Substratum:
30 to 72 inches, grayish brown very gravelly sandy loam with few mottles

Included with this soil in mapping are about 5 percent moderately well drained Hogansburg and Kalurah soils on slightly higher positions and on undulating areas. About 5 percent of this unit are very poorly drained Runeberg and Cook soils along drainageways and in landscape depressions. About 5 percent of this unit are the somewhat poorly drained Coveytown soils where sandy surface and subsoil textures occur, and the somewhat poorly drained Muskellunge soils in slight depressions where clayey textures dominate. Also there are small inclusions with very stony surfaces and areas moderately deep to bedrock. In some areas, the surface texture is fine sandy loam or sandy loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface, and moderately slow or slow in the subsoil and substratum

Available water capacity (average for 40-inch profile): moderate

Depth to seasonal high water table: perched 12 to 18 inches deep at some time from November through May
Root zone: mainly to 18 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for hayland or pasture. Only drained areas of this soil qualify as prime farmland in Clinton County.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and harvest in the fall. Surface and subsurface drainage can improve farm operation efficiency and increase crop yield. Conservation tillage systems, crop rotation, and maintenance of drainageways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table can cause significant wetness in barnyards and heavily traveled areas of the pasture. Forage may show stunted growth during the early part of the growing season as a result of wetness. Rotational grazing, deferred grazing, proper stocking rates, maintenance of drainageways and yearly mowing are good management practices.

The potential productivity for growing red maple on this soil is moderate. The seasonal high water table may cause difficulty in maneuvering heavy equipment because of soft ground conditions. Limited rooting depth and wetness may adversely affect seedling growth and cause windthrow.

The main limitation if this soil is used as site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area in the map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Construction plans should specify providing coarse grained subgrade material. Adequate drainage in critical areas will also decrease the potential for frost action and seasonal wetness.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the moderately slow permeability. A better suited site should be considered for this use such as a more moderately permeable soil. Conventional septic system designs will perform poorly on this soil. Alternative systems that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness.

The capability subclass is 3w.

MeB—Malone gravelly loam, 3 to 8 percent slopes

This very deep, gently sloping, and somewhat poorly drained soil occurs on slightly concave or undulating glacial till plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown gravelly loam

Subsoil:
9 to 30 inches, brown gravelly fine sandy loam with many mottles

Substratum:
30 to 72 inches, grayish brown very gravelly sandy loam with few mottles

Included with this soil in mapping are about 5 percent moderately well drained Hogansburg and Kalurah soils on slightly higher positions. About 5 percent of this unit are very poorly drained Runeberg and Cook soils along drainageways and in depressions. About 5 percent of this unit are the somewhat poorly drained Coveytown soils where sandy surface and subsoil textures occur, and Muskellunge soils in slight depressions where clayey textures dominate. Also there are small inclusions of moderately deep Ogdensburg soils, and soils with a very stony surface. In some areas, the surface texture is fine sandy loam or sandy loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface, and moderately slow or slow in the subsoil and substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: perched 12 to 18 inches deep at some time from November through May
Root zone: mainly to 18 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for hayland or pasture. Only drained areas of this soil qualify as prime farmland in Clinton County.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and harvest in the fall. Surface and subsurface drainage will help improve efficiency of farm operations and increase crop yield. Conservation tillage systems, crop rotation, and maintenance of waterways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table can cause significant wetness in barnyards and heavily traveled areas of the pasture. Forage may show stunted growth during the early part of the growing season as a result of wetness. Rotational grazing, deferred grazing, proper stocking rates, surface drainage, and yearly mowing are good management practices.

The potential productivity for growing red maple on this soil is moderate. The seasonal high water table may cause difficulty in maneuvering heavy equipment because of soft ground conditions. Limited rooting depth and wetness may adversely affect seedling growth and cause windthrow.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area in the map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Construction plans should specify providing coarser grained subgrade material. Adequate drainage in critical areas will also decrease the potential for frost action and seasonal wetness.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the moderately slow permeability. A better suited site should be considered for this use such as a soil with moderately rapid permeability. Conventional septic system designs will perform poorly on this soil. Alternative systems that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods

of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness.

The capability subclass is 3w.

MfB—Malone gravelly loam, gently sloping, very stony

This very deep and somewhat poorly drained soil occurs on slightly concave or undulating glacial till plains. Large stones cover up to 3 percent of the soil surface. Slopes range from 0 to 8 percent, but are dominantly 3 to 8 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown gravelly loam

Subsoil:
9 to 30 inches, brown gravelly fine sandy loam with many mottles

Substratum:
30 to 72 inches, grayish brown very gravelly sandy loam with few mottles

Included with this soil in mapping are about 5 percent moderately well drained Hogansburg and Kalurah soils on slightly higher positions. About 5 percent of this unit are very poorly drained Runeberg and Cook soils along drainageways and in depressions. About 5 percent of this unit are the somewhat poorly drained Coveytown soils where sandy surface and subsoil textures occur, and the Muskellunge soils in slight depressions where clayey textures dominate. Also there are small inclusions of moderately deep Ogdensburg soils as well as non-stony areas. In some areas, the surface texture is fine sandy loam or sandy loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the mineral surface, and moderately slow or slow in the subsoil and substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: perched 12 to 18 inches deep at some time from November through May
Root zone: mainly to 18 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland or pasture.

This soil is poorly suited to growing cultivated crops and hay. Large surface stones inhibit efficient use of farm machinery and cause serious wear and tear on equipment. The seasonal high water table can delay planting in the spring and harvest in the fall. Surface and subsurface drainage; however, can improve efficiency of farm operations and increase crop yield. Stone clearing, conservation tillage systems, crop rotation, and maintenance of waterways are good management practices.

This soil is poorly suited to pasture. Large surface stones inhibit effective pasture management such as yearly mowing. The seasonal high water table can cause significant wetness in barnyards and heavily traveled areas of the pasture especially in the spring. Forage may show stunted growth during the early part of the growing season as a result of wetness. Stone clearing, deferred grazing, rotational grazing, proper stocking rates, surface drainage, and yearly mowing are good management practices.

The potential productivity for growing red maple on this soil is moderate. The seasonal high water table may cause difficulty in maneuvering heavy equipment because of soft ground conditions. Limited rooting depth and wetness may adversely affect seedling growth and cause windthrow.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area in the map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Providing a coarse-grained subgrade material will reduce the potential for frost action. Adequate drainage in critical areas will also decrease the potential for frost action and seasonal wetness.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the moderately slow permeability. A better suited site should be considered for this use such as a soil with moderately rapid permeability. Conventional septic system designs will perform poorly on this soil. Alternative systems that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness.

The capability subclass is 6s.

Mk—Markey muck

This very deep, nearly level, and very poorly drained soil formed in organic deposits, 16 to 50 inches thick, over sandy material in depressions on lake and outwash plains. Slopes are less than 2 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 14 inches, black muck

Subsurface layer:
14 to 27 inches, black muck

Substratum:
27 to 72 inches, gray sand

Included with this soil in mapping are about 10 percent very poorly drained Bucksport soils in deeper organic deposits. About 5 percent of this unit consist of poorly drained Deinache soils formed in mainly sand deposits near the margin. Small areas of very poorly drained Medomak or other flood plain soils are included near streams. Also included are small areas of Saprists and Aquents soils which are commonly ponded year-round. Small areas of somewhat excessively drained and excessively drained Adams soils and moderately well drained Croghan soils are on knolls in some units. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately slow to moderately rapid in the organic part, and rapid in the substratum
Available water capacity (average for 40-inch profile): high

Depth to seasonal high water table: 12 inches above the soil surface to 12 inches deep at some time from November through June
Root zone: mainly to 12 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland.

This soil is poorly suited to growing cultivated crops and hay because of the seasonal high water table. The surface is saturated during a substantial part of the growing season. Drainage would be expensive to install and maintain. Outlets may be very difficult to establish without draining important wetlands.

This soil is poorly suited to pasture. The seasonal high water table severely limits productivity of most pasture plants. Ground conditions are generally too soft to support livestock traffic without damage to forage plants.

The potential productivity for growing balsam fir on this soil is moderately high. However, the organic material has low bearing strength for supporting heavy timber harvesting equipment. Because of the seasonal high water table, seedling mortality can be significant, except for water tolerant species. Because of the shallow rooting depth of this soil, there is a severe potential for windthrow. Selecting shallow rooted species and keeping clear-cutting to a minimum will help alleviate windthrow.

The main limitations if this soil is used as a site for dwellings are the seasonal high water table, low bearing strength, and potential for subsidence. A better suited site should be considered for dwellings.

The main limitations if this soil is used as a site for local roads and streets are the seasonal high water table, potential frost action, and potential subsidence. New roads should be routed around this map unit where possible. Constructing roads on raised coarse grained fill material and providing adequate drainage will help prevent problems due to wetness and frost action. Excavation of organic material before the addition of fill will likely be required to provide a stable road bed.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, the potential for subsidence, and the soil's poor filtering ability. A better suited site should be considered for this use. The rapid permeability in the substratum and the prolonged ponding create a severe risk of surface or ground water pollution.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table, excess humus, and the tendency of cutbanks to cave. Digging operations may be restricted to the driest period of the year unless drainage is installed. Sloughing of soil in the excavated area will also occur because of wetness and high organic matter content. Mechanically supporting trench walls will help prevent the possibility of soil caving in on workers or other possible victims.

The capability subclass is 6w if the soil is undrained and 4w if drained.

Mn—Massena fine sandy loam

This very deep, nearly level, and somewhat poorly drained soil occurs on smooth and slightly concave glacial till lowlands. Slopes range from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown fine sandy loam

Subsoil:
9 to 25 inches, brown gravelly fine sandy loam with many mottles
25 to 32 inches, grayish brown and yellowish brown gravelly loam with common mottles

Substratum:
32 to 48 inches, gray gravelly loam with many mottles
48 to 72 inches, grayish brown gravelly loam with common mottles

Included with this soil in mapping are about 5 percent moderately well drained Amenia soils on slightly higher positions. About 5 percent of this unit are very poorly drained Runeberg and Cook soils along drainageways and in landscape depressions. About 5 percent of this unit are the somewhat poorly drained Northway soils where sandy surface and subsoil textures occur. Also, the somewhat poorly drained Rhinebeck or Kingsbury soils occur in slight depressions where clayey textures dominate. In addition, soils similar to Roundabout soils with few or no rock fragments and soils with a stony surface are included. In some areas, the surface texture is loam or sandy loam. These included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface, and moderately slow or slow in the subsoil and substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: 12 to 18 inches deep at some time from November through May
Root zone: mainly to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for hayland or pasture. Only drained areas of this soil are considered to be prime farmland in Clinton County.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and harvest in the fall. Surface and subsurface drainage will help to improve the efficiency of farm operations and increase crop yield in most areas of this unit. Conservation tillage systems, crop rotation, and maintenance of waterways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table can cause significant wetness problems in barnyards and heavily traveled areas of the pasture especially in the spring. Forage may show stunted growth during the early part of the growing season as a result of wetness. Rotational grazing, deferred grazing, proper stocking rates, surface drainage, and yearly mowing are good management practices.

The potential productivity for growing eastern white pine on this soil is very high. Because of the seasonal high water table, soft ground conditions in the spring will cause some difficulty in maneuvering heavy equipment. Limited rooting depth and wetness are factors that impact seedling growth and may result in some windthrow.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area within the map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Providing a coarse-grained subgrade will reduce frost action. Adequate drainage in critical areas will also decrease the potential for frost action and seasonal wetness.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the moderately slow permeability. A better suited site should be considered for this use such as a soil with moderately rapid permeability. Conventional septic system designs will perform poorly on this soil.

Alternative systems that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless a drainage system is installed. Sloughing of soil in the excavated area may also occur because of wetness.

The capability subclass is 3w.

Mp—Medomak silt loam, stratified substratum

This very deep, level or nearly level, and very poorly drained soil is on the lowest position of flood plains near rivers and streams where frequent flooding occurs. Slopes range up to 1 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves
1 to 13 inches, very dark grayish brown silt loam

Substratum:
13 to 26 inches, dark gray very fine sandy loam with common mottles
26 to 47 inches, very dark gray very fine sandy loam with few mottles
47 to 72 inches, very dark gray gravelly fine sandy loam

Included with this soil in mapping are about 5 percent somewhat poorly drained Cornish soils on slightly higher positions. About 5 percent of this unit consist of Fluvaquents-Udifluvents complex where drainage and texture are more variable. Also included in this map unit are Wonsqueak and Markey soils where moderately thick organic deposits occur on the surface. Some areas of this unit have a fine sandy loam or very fine sandy loam surface. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the mineral surface and upper substratum; and moderately rapid to rapid in the lower substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 12 inches above the surface to 6 inches below the surface at some time from September through June
Root zone: dominantly to 12 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for brush or woodland.

This soil is poorly suited to growing cultivated crops and hay because of the seasonal high water table and frequent flooding or ponding. The surface is saturated by water during a significant part of the growing season. Drainage may be very expensive to install and maintain. Drainage outlets are difficult to establish without draining important wetland.

This soil is poorly suited to pasture. The seasonal high water table is near the surface during part of the growing season and flooding frequently occurs. Areas of this soil will not support typical pasture plant species without substantial drainage. Ground conditions are generally too soft in the spring for usual livestock traffic and is subject to erosion. Drier areas would provide better conditions for forage growth and maintenance.

The potential productivity for growing eastern white pine on this soil is high. Because of the seasonal high water table, soft ground conditions will not support most heavy machinery such as timber harvesting equipment. Equipment use is often restricted to drier summer months or when the ground is frozen. Since the rooting depth is also limited by soil wetness, seedling mortality and windthrow may be severe management problems on this soil.

The main limitations if this soil is used as a site for dwellings are the seasonal high water table and the flooding potential. A better suited site should be considered such as a higher nearby area.

The main limitations if this soil is used as a site for local roads and streets are the seasonal high water table, flooding, frost action. Coarse-grained fill material and adequate drainage will help reduce frost action and wetness. In areas of high stream velocity, road banks can be protected from erosion by riprap and other conservation practices.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, the potential for flooding, and the poor filtering ability of the lower substratum. A better suited site should be considered for this use.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the tendency of the soil to cave in. Digging operations may be limited to dry periods unless a drainage system is installed. Sloughing of soil in the excavated area may also occur because of wetness. Trench walls can be mechanically supported to avoid the possibility of soil collapsing on workers or other people.

The capability subclass is 6w.

Ms—Mino loam

This very deep, nearly level, and somewhat poorly drained soil is in slightly concave areas on lake plains. Slopes range from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown loam

Subsoil:
9 to 12 inches, brown very fine sandy loam with common mottles
12 to 16 inches, pale brown loamy very fine sand with many mottles
16 to 24 inches, brown very fine sandy loam with many mottles

Substratum:
24 to 37 inches, light gray very fine sandy loam with many mottles
37 to 78 inches, gray very fine sandy loam with common mottles

Included with this soil in mapping are about 5 percent somewhat poorly drained Roundabout, Hailesboro, and Muskellunge soils in scattered areas where there are less sand and more silt or clay. About 5 percent of this map unit consists of soils similar to Sciota and in deep sands, resulting from glacial lake beach deposits. Also included are about 5 percent somewhat poorly drained Swanton soils and moderately well drained Flackville soils where clay deposits occurs within 40 inches. Small areas of very poorly drained Pinconning soils are in depressions. In some areas, the surface texture is sandy loam or very fine sandy loam. Included areas make up about 20 percent of this map unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate throughout the mineral soil
Available water capacity (average for 40-inch profile): high

Depth to seasonal high water table: 12 to 18 inches deep at some time from November through May
Root zone: mainly to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Many areas of this soil are used for hay or corn. A few areas are used for pasture or woodland. Only drained areas of this soil qualify as prime farmland in Clinton County.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and harvest operations in the fall. Surface and subsurface drainage will help to improve the efficiency of farm operations and increase crop yields. Conservation tillage systems, crop rotation, and maintenance of drainageways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table may limit the growth of forage plants in the spring. Excessive grazing within areas of this soil during wet periods increases compaction of the surface layer and subsequent loss of desired plant species. Rotational grazing, deferred grazing, proper stocking rates, maintenance of drainageways, and yearly mowing are good management practices.

The potential productivity for growing white ash on this soil is moderate. Heavy harvesting equipment may bog down and cause deep ruts during wet periods. Rooting depth is limited by the seasonal high water table which may restrict seedling growth. Shallow root systems are commonly subject to windthrow. Selecting species that are tolerant of wet soil conditions will help increase seedling survival and reduce windthrow.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. Foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also help control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Constructing roads on a raised bed of coarse-grained material and providing adequate drainage will decrease the potential damage from frost action and wetness.

The main limitation if this soil is used as a site for septic tank absorption fields is the seasonal high water table. More convex nearby areas may be better suited for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be limited to the drier periods of the year unless a drainage system is installed.

The capability subclass is 3w.

MtB—Monadnock fine sandy loam, 3 to 8 percent slopes

This very deep, gently sloping, and well drained soil occurs on slightly convex glacial till uplands.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
2 inches thick layer of leaves, needles and roots
0 to 2 inches, dark grayish brown fine sandy loam

Subsoil:
2 to 4 inches, dark reddish brown very fine sandy loam
4 to 15 inches, dark brown fine sandy loam

15 to 27 inches, brown fine sandy loam
27 to 36 inches, dark yellowish brown fine sandy loam

Substratum:
36 to 48 inches, yellowish brown and dark yellowish brown loamy fine sand
48 to 72 inches, brown loamy fine sand

Included with this soil in mapping is about 5 percent well drained Becket soils and Hermon soils. Becket soils have a dense substratum layer. Hermon soils are very gravelly or cobbly in the subsoil and substratum. About 5 percent of this unit is moderately well drained Sunapee and Skerry soils on slightly concave areas or nearly level areas. Also included are small areas of somewhat poorly drained Adirondack soils adjacent to drainageways and in nearly level areas. In southwestern Clinton County, there are inclusions of Fernlake soils having sandier textures throughout the soil profile. On the other hand, there are inclusions of similar soils with a loamy substratum mainly in the northwestern portion of the county. Small areas of very stony soils and strongly sloping areas also occur as inclusions. In some areas the surface texture is sandy loam or loam. Included areas make up about 20 percent of this map unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface and subsoil, and moderately rapid in the substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as hay or pasture. This soil meets the requirements of prime farmland.

This soil is well suited to growing cultivated crops and hay. Erosion can be a management problem causing a reduction in soil productivity, especially on long slopes. Care should be taken when cultivating fields. Traveling along the contour of the landscape will help slow erosion rates. Conservation tillage systems, crop rotation, stripcropping, and the use of cover crops are good management practices.

This soil is well suited to pasture. Erosion can be a management problem particularly on long slopes subject to heavy grazing. Overgrazing should be avoided. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is high. There are no major limitations for woodland management on this soil. Plant competition may be a problem in areas where proper site preparation following harvest does not occur.

There are no major limitations if this soil is used as a site for dwellings with basements on this soil.

There are no major limitations if this soil is used as a site for local roads and streets on this soil.

There are no major limitations if this soil is used as a site for septic tank absorption fields on this soil.

The main limitation if this soil is used as a site for shallow excavations is the tendency of the soil to cave in, because of its sandy substratum. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or unsuspecting children.

The capability subclass is 2e.

MtC—Monadnock fine sandy loam, 8 to 15 percent slopes

This very deep, strongly sloping, and well drained soil is on convex areas on the crest and sides of low hills in glaciated uplands.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
2 inches thick layer of leaves, needles and roots
0 to 2 inches, dark grayish brown fine sandy loam

Subsoil:
2 to 4 inches, dark reddish brown very fine sandy loam
4 to 15 inches, dark brown fine sandy loam
15 to 27 inches, brown fine sandy loam
27 to 36 inches, dark yellowish brown fine sandy loam

Substratum:
36 to 48 inches, yellowish brown and dark yellowish brown loamy fine sand
48 to 72 inches, brown loamy fine sand

Included with this soil in mapping is about 5 percent moderately well drained Sunapee and Skerry soils in undulating areas and on footslopes. About 5 percent of this unit consists of well drained Becket soils intermixed in the unit where the substratum is firm and dense. Also included are small areas of somewhat poorly drained Adirondack soils along drainageways and in depressions. Some areas in southwestern Clinton County have inclusions of Fernlake soils with sandier textures throughout the soil profile. In the northwestern portion of the county, there are inclusions of similar soils with a loamy substratum. Small areas of Monadnock soils on steeper slopes and small areas with stones on the surface are included. In some areas the surface texture is sandy loam or loam. Included areas make up about 20 percent of this map unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface and subsoil, and moderately rapid in the substratum.
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Many areas of this soil are in hay or pasture. Some areas are reverting to woodland or brush.

This soil is moderately suited to growing cultivated crops and hay. Erosion is frequently a management problem, particularly on long slopes and areas planted to row crops. Future crop productivity may be reduced by loss of valuable topsoil. Cultivating along the contour of the landscape will help prevent excessive erosion. Conservation tillage systems, crop rotation, stripcropping and the use of cover crops are good management practices.

This soil is moderately suited to pasture. Erosion can be a significant management problem on heavily grazed areas of this soil. Avoiding excessive grazing will help minimize erosion and sustain key plant species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is high. There are no major limitations if this soil is used as a site for woodland management. Plant

competition may be a problem in areas where proper site preparation following harvest does not occur.

The main limitation if this soil is used as a site for dwellings is slope. Some grading and land shaping around structures may be necessary for construction on this soil.

The main limitation if this soil is used as a site for local roads and streets is slope. Planning and building roads on the contour of the land is one way to alleviate the slope limitation.

The main limitation if this soil is used as a site for septic tank absorption fields is slope. Installing absorption field pipelines along the contours of the slope is one way to compensate for the strongly sloping terrain.

The main limitation if this soil is used as a site for shallow excavations is the tendency for the soil to cave in, because of its sandy substratum. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or unsuspecting children.

The capability subclass is 3e.

MuC—Monadnock fine sandy loam, strongly sloping, very bouldery

This very deep and well drained soil occurs on side slopes and rolling glacial till uplands. Large stones cover up to 3 percent of the soil surface. Slopes range 3 to 15 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
2 inches thick layer of leaves, needles and roots
0 to 2 inches, dark grayish brown fine sandy loam

Subsoil:
2 to 4 inches, dark reddish brown very fine sandy loam
4 to 15 inches, dark brown fine sandy loam
15 to 27 inches, brown fine sandy loam
27 to 36 inches, dark yellowish brown fine sandy loam

Substratum:
36 to 48 inches, yellowish brown and dark yellowish brown loamy fine sand
48 to 72 inches, brown loamy fine sand

Included with this soil in mapping is about 5 percent moderately well drained Sunapee soils in nearly level areas and on footslopes. About 5 percent of this unit consists of well drained Becket soils intermixed in the unit where the substratum is firm and dense. Also included are small areas of somewhat poorly drained Adirondack soils along drainageways and other wet areas. Some places in southwest Clinton County have inclusions of Fernlake soils with sandier textures throughout the soil profile. On the other hand, there are inclusions of similar soils with a loamy substratum, mainly in the northwestern portion of the county. Small areas of Monadnock soils on steeper slopes and small areas without boulders on the surface are included. Included areas make up about 20 percent of this map unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface and subsoil, and moderately rapid in the substratum
Available water capacity (average for 40-inch profile): moderate

Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland or pasture.

This soil is poorly suited to growing cultivated crops and hay. Large surface stones inhibit efficient use of farm machinery and can cause serious wear and tear on equipment. Stone clearing will be necessary to accommodate most farm machinery use and to avoid excess damage and wear.

This soil is poorly suited to pasture. The large surface stones will discourage good management practices such as yearly mowing. Overgrazing should be avoided. Rotational grazing, proper stocking rates, and stone removal are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is high. There are no major limitations for woodland management on this soil. Plant competition may be a problem in areas where proper site preparation following harvest does not occur.

The main limitation if this soil is used as a site for dwellings with basements is slope. This unit will require some grading and landscaping expenses because of the strongly sloping conditions. Dwellings should conform to the natural slope of the landscape.

The main limitation if this soil is used as a site for local roads and streets is the strongly sloping conditions. Constructing roads along the contour of the land will reduce the slope limitation.

The main limitation if this soil is used as a site for septic tank absorption fields is slope. Installation of the system on lesser sloping areas will reduce costs and increase operating efficiency. Absorption field pipelines can be installed along the contour of the slope to reduce the slope limitation. The cost of landshaping will be higher on these strongly sloping areas than on gently sloping areas.

The main limitations if this soil is used as a site for shallow excavations are slope and the soil's tendency to cave in. Because of its sandy substratum, trench walls tend to be unstable and should be mechanically supported to prevent collapse on workers or other victims.

The capability subclass is 6s.

MuD—Monadnock fine sandy loam, moderately steep, very bouldery

This very deep and well drained soil occurs on hillsides and between ridges of glacial till uplands. Large stones cover up to 3 percent of the soil surface. Slopes range 15 to 35 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
2 inches thick layer of leaves, needles and roots
0 to 2 inches, dark grayish brown fine sandy loam

Subsoil:
2 to 4 inches, dark reddish brown very fine sandy loam
4 to 15 inches, dark brown fine sandy loam
15 to 27 inches, brown fine sandy loam
27 to 36 inches, dark yellowish brown fine sandy loam

Substratum:
36 to 48 inches, yellowish brown and dark yellowish brown loamy fine sand
48 to 72 inches, brown loamy fine sand

Included with this soil in mapping is about 5 percent Becket soils which have a dense and firm substratum. About 5 percent of this map unit is moderately well drained Sunapee soils on lower, slightly more concave landscape positions. Some places in the southwestern part of the county have inclusions of Fernlake soils with sandier textures throughout the soil profile. On the other hand, there are inclusions of similar soils with a loamy substratum, mainly in the northwestern portion of the county. Also included are moderately deep areas of Tunbridge soils, very gravelly spots and non-bouldery areas. Included areas make up about 15 percent of this map unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface and subsoil, and moderately rapid in the substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland or unimproved pasture.

This soil is not suited to growing cultivated crops and hay because of surface stones and steep slopes. Stone clearing will be necessary to accommodate farm machinery use on moderately steep areas and to avoid excess equipment damage and wear. Erosion will be a serious management problem in areas of cultivation or other vegetative disturbance.

This soil is poorly suited to pasture. Large stones covering the surface inhibit yearly mowing and other maintenance practices. Overgrazing should be avoided to reduce the risk of soil erosion and encourage plant growth. Rotational grazing, proper stocking rates, and stone clearing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is high. Maneuvering equipment over this soil may be difficult because of the steep slope.

The main limitation if this soil is used as a site for dwellings with basements is the moderately steep slopes. The design of the dwelling can conform to the natural slope in order to avoid some landscaping costs. Shaping and grading the land will be less expensive on lesser sloping areas.

The main limitation if this soil is used as a site for local roads and streets is slope. Roads can be built on the contour, or may be routed around this unit to lessen construction costs. Careful landscaping and grading practices will be needed on road banks in some places.

The main limitation if this soil is used as a site for septic tank absorption fields is slope. A better suited site should be considered such as a lesser sloping inclusion or nearby area. Installation of the septic system on a lesser sloping site will reduce costs and increase operating efficiency.

The main limitations if this soil is used as a site for shallow excavations are slope and the tendency of the soil to cave in. Because of its sandy substratum, trench walls tend to be unstable and should be mechanically supported to prevent collapse on workers or other victims. Maneuvering construction equipment on this soil with steep slopes will be difficult and risky at times.

The capability subclass is 7s.

MuF—Monadnock fine sandy loam, very steep, very bouldery

This very deep and well drained soil occurs on hillsides of glacial till uplands. Large stones cover up to 3 percent of the soil surface. Slopes range 35 to 60 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
2 inches thick layer of leaves, needles and roots
0 to 2 inches, dark grayish brown fine sandy loam.

Subsoil:
2 to 4 inches, dark reddish brown very fine sandy loam
4 to 15 inches, dark brown fine sandy loam
15 to 27 inches, brown fine sandy loam
27 to 36 inches, dark yellowish brown fine sandy loam

Substratum:
36 to 48 inches, yellowish brown and dark yellowish brown loamy fine sand
48 to 72 inches, brown loamy fine sand

Included with this soil in mapping is about 5 percent Becket soils which have a dense and firm substratum. Some places in the southwestern part of the county have inclusions of Fernlake soils with sandier textures throughout the profile. Also included are moderately deep areas of Tunbridge soils and very gravelly soils similar to Colton or Hermon soils. Included areas make up about 15 percent of this map unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the surface and subsoil, and moderately rapid in the substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland.

This soil is not suited to growing cultivated crops and hay because of surface stones and steep slopes. Erosion will be a serious management problem in areas of vegetative disturbance.

This soil is poorly suited to pasture because of very steep slopes and boulders. Overgrazing should be avoided to reduce the risk of soil erosion and encourage plant growth.

The potential productivity for growing eastern white pine on this soil is high. However, equipment use on these very steep slopes is severely limited by safety considerations and erosion potential.

The main limitation if this soil is used as a site for dwellings with basements is very steep slopes. A better suited site on lesser sloping areas should be considered.

The main limitation if this soil is used as a site for local roads and streets is slope. Constructing roads around this unit should be considered. Careful landscaping, grading, and surface drainage will be needed in most areas of this unit.

The main limitation if this soil is used as a site for septic tank absorption fields is slope. A better suited site should be considered such as a lesser sloping inclusion or nearby area.

The main limitations if this unit is used as a site for shallow excavations are very steep slopes and the tendency of the soil to cave in. Because of the sandy substratum, trench walls tend to be unstable and should be mechanically supported to prevent collapse on workers or other victims. Maneuvering equipment for digging on this slope will be difficult and risky unless safety precautions are taken.

The capability subclass is 7s.

MvA—Mooers loamy sand, 0 to 3 percent slopes

This very deep and moderately well drained soil is on nearly level and slightly undulating lake plains and stream terraces.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, dark brown loamy sand

Subsoil:
8 to 20 inches, yellowish brown sand
20 to 31 inches, dark yellowish brown sand with common mottles
31 to 47 inches, brown and yellowish brown fine sand with many mottles

Substratum:
47 to 49 inches, brown loamy very fine sand with many mottles
49 to 60 inches, light olive brown loamy very fine sand with many mottles
60 to 72 inches, light brownish gray and brown fine sand

Included with this soil in mapping are about 5 percent somewhat poorly drained Sciota and Wainola soils in slightly concave positions. About 5 percent of this soil are moderately well drained Croghan soils having a more reddish brown subsoil. Small areas of moderately well drained Flackville soils are included where clayey layers occur within a 40 inch depth. Also, small inclusions of somewhat excessively drained Champlain and Adams soils occur on more convex areas. In areas associated with glacial till soils, small inclusions of soil similar to moderately well drained Occur and somewhat poorly drained Coveytown soils exist. In some places, the surface texture is loamy fine sand, fine sand or sand. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the surface layer and subsoil, and rapid or moderately rapid in the substratum
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: 18 to 30 inches deep st some time from November through May
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for growing hay or corn.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table may delay planting and harvesting operations during periods of heavy precipitation. Installation of drainage, especially in somewhat poorly drained inclusions, will aid in the efficiency of farm operations. Droughtiness can also be a limitation to crop yield because of the low available water capacity. Conservation tillage systems, crop rotations, and the use of cover crop are good management practices.

This soil is well suited to pasture. The seasonal high water table can cause muddy barnyard conditions and stunted forage in some areas of this soil. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is high. Seedling mortality may be a moderate limitation during dry periods because of a low available water capacity.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site on a more convex area will likely be drier for basement construction. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate most of the wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

There are no major limitations if this soil is used as a site for local roads and streets.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the soil's poor ability to filter effluent properly. A better suited site should be considered for this use. Higher spots within the map unit will likely perform better for this use. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered. Because of its rapid permeability, there is a possibility of ground water contamination.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and tendency of the soil to cave in. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 2w.

MvB—Mooers loamy sand, 3 to 8 percent slopes

This very deep, gently sloping, and moderately well drained soil is on sandy lake plains and on footslopes of sandy ridges.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, dark brown loamy sand

Subsoil:
8 to 20 inches, yellowish brown sand
20 to 31 inches, dark yellowish brown sand with common mottles
31 to 47 inches, brown and yellowish brown fine sand with many mottles

Substratum:
47 to 49 inches, brown loamy very fine sand with many mottles
49 to 60 inches, light olive brown loamy very fine sand with many mottles
60 to 72 inches, light brownish gray and brown fine sand

Included with this soil in mapping are about 5 percent somewhat poorly drained Sciota and Wainola soils in slightly concave positions and near streams. About 5 percent of this soil are moderately well drained Croghan soils having a more reddish brown subsoil. Small areas of moderately well drained Flackville soils are included where clayey layers occur within a 40 inch depth. Also, small inclusions of somewhat excessively drained Champlain and Adams soils occur on slightly more convex areas. In areas associated with glacial till, small inclusions of soils similar to moderately well drained Occur and somewhat poorly drained Coveytown soils also exist. In some

places, the surface texture is loamy fine sand, fine sand or sand. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the surface layer and subsoil, and rapid or moderately rapid in the substratum
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: 18 to 30 inches deep at some time from November through May
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for growing hay or corn.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table may delay planting and harvesting operations during periods of heavy precipitation. Installation of drainage, especially in areas of somewhat poorly drained inclusions, will aid in the efficiency of farm operations. Droughtiness can also be a limitation to crop yield because of low available water capacity. Conservation tillage systems, crop rotations and establishing a cover crop are good management practices.

This soil is well suited to pasture. The seasonal high water table can cause muddy barnyard conditions and stunted forage. Rotational grazing, proper stocking rates and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is high. Seedling mortality may be a moderate limitation during dry periods because of low available water capacity.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site on a higher area in the map unit will likely be drier for basement construction. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate most of the wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

There are no major limitations if this soil is used as a site for local roads and streets.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the soil's poor ability to filter effluent properly. A better suited site, such as a higher spot within the map unit, should be considered for this use. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered. Because of rapid permeability of this soil, there is a possibility of ground water contamination.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the tendency for the soil to cave in. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 2w.

MwA—Muskellunge silty clay loam, 0 to 3 percent slopes

This very deep, nearly level, and somewhat poorly drained soil occurs on swales and smooth areas on glacial lake plains (fig. 16).

Figure 16. —This nearly level, plowed field is mainly somewhat poorly drained Muskellunge silty clay loam. The slight surface undulation midway down the field is characteristic of Flackville soils having a mantle of fine sand overlying a clayey substratum. At the far end of the field are deeper sand deposits representing Mooers loamy sand. The Johnson Mountain Range is in the far background.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, dark brown silty clay loam

Subsoil:
9 to 16 inches, dark grayish brown silty clay with many mottles
16 to 38 inches, brown silty clay with common mottles

Substratum:
38 to 45 inches, brown silty clay with many mottles
45 to 72 inches, dark yellowish brown clay with common mottles

Included with this soil in mapping are about 5 percent moderately well drained Heuvelton soils on knolls or slightly convex positions, and on areas adjacent to dissected streams. About 5 percent of this unit are poorly drained Adjidaumo soils in slightly depressional areas and along drainageways. Small areas of somewhat poorly drained Hailesboro, Roundabout, and Mino soils are included where there is less clay. Also small areas of somewhat poorly drained Swanton soils are included where the surface and subsoil are more loamy. In some areas, the surface texture is silty clay. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately slow in the mineral surface layer and slow in the subsoil and substratum

Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 12 to 18 inches deep at some time from November through May
Root zone: mainly to 18 inches deep
Shrink-swell potential: moderate
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for crops or hay. Only drained areas of this soil qualify as prime farmland.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and harvest operations in the fall. Surface and subsurface drainage will help to improve the efficiency of farm operations and increase crop yield. Because of moderately slow permeability in the surface layer, the potential for pesticide and nutrient loss from runoff on this soil is high. Conservation tillage systems, crop rotation, and maintenance of waterways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table can cause significant wetness problems in barnyards and heavily traveled areas of the pasture especially in the spring. Forage may show stunted growth during the early part of the growing season as a result of wetness. Rotational grazing, deferred grazing, proper stocking rates, surface drainage, and yearly mowing are good management practices.

The potential productivity for growing sugar maple on this soil is moderate. Because of the seasonal high water table, heavy harvesting equipment can bog down in the spring and cause deep ruts. Also, windthrow may be a management problem particularly in poorly drained spots where tree roots are restricted by seasonal wetness.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as on a higher inclusion within the map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water flowing from higher areas by carrying it away from the dwelling.

The main limitations if this soil is used as a site for local roads and streets are frost action and low soil strength. Providing a coarse-grained subgrade will reduce the frost action. Adequate drainage in critical areas will also decrease the potential for frost action.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the slow permeability. A better suited site, such as higher spots within the map unit, should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness.

The capability subclass is 3w.

MwB—Muskellunge silty clay loam, 3 to 8 percent slopes

This very deep, gently sloping, and somewhat poorly drained soil occurs on toeslopes, and on slightly dissected or undulating areas of glacial lake plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, dark brown silty clay loam

Subsoil:
9 to 16 inches, dark grayish brown silty clay with many mottles
16 to 38 inches, brown silty clay with common mottles

Substratum:
38 to 45 inches, brown silty clay with many mottles
45 to 72 inches, dark yellowish brown clay with common mottles

Included with this soil in mapping are about 5 percent moderately well drained Heuvelton soils on knolls and slightly convex positions. About 5 percent of this unit are poorly drained Adjidaumo soils in slightly depressional areas and along drainageways. Small areas of somewhat poorly drained Hailesboro, Roundabout and Mino soils are included where there is less clay. Also small areas of somewhat poorly drained Swanton soils are included where the surface and subsoil are more loamy. In some areas, the surface texture is silty clay. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately slow in the surface layer and slow in the subsoil and substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 12 to 18 inches deep at some time from November through May
Root zone: mainly to 18 inches deep
Shrink-swell potential: moderate
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as cropland, hayland, or pasture. Only drained areas of this soil qualify as prime farmland.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and harvest operations in the fall. Surface and subsurface drainage will help to improve the efficiency of farm operations and increase crop yield. Soil erosion may become a management problem on long slopes left unprotected by vegetative cover. Because of moderately slow permeability and slope, the potential for pesticide and nutrient loss from runoff on this soil is high. Conservation tillage systems, crop rotation, and maintenance of waterways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table can cause significant wetness problems in barnyards and heavily traveled areas of the pasture especially in the spring. Forage may show stunted growth during the early part of the growing season as a result of wetness. Rotational grazing, deferred grazing, proper stocking rates, surface drainage, and yearly mowing are good management practices.

The potential productivity for growing sugar maple on this soil is moderate. Because of the seasonal high water table, heavy harvesting equipment may bog down in the spring resulting in deep ruts. Windthrow can also be a management problem particularly in poorly drained spots where tree roots are restricted by seasonal wetness.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as on a higher area within the map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitations if this soil is used as a site for local roads and streets are frost action and low soil strength. Providing a coarse-grained subgrade will reduce the risk of frost action. Adequate drainage in critical areas will also decrease the potential for frost action.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the slow permeability. A better suited site, such as higher spots within the map unit, should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness.

The capability subclass is 3w.

NeC—Neckrock-Summerville complex, strongly sloping, very rocky

This unit consists of well drained, strongly sloping, and gently sloping soils overlying limestone bedrock on ridges and benches. The Neckrock soils are moderately deep to bedrock and generally on broad ridgetops, benches and mid slope positions. The Summerville soils are shallow and generally on slope shoulders and high areas of benches. Exposed bedrock covers 2 to 10 percent of the surface of the unit. This unit consists of about 45 percent Neckrock soils, 35 percent Summerville soils, and 20 percent other soils and rockoutcrop. The Neckrock and Summerville soils are so intermingled that it was not practical to map them separately. Slopes range from 3 to 15 percent.

The typical sequence, depth, and composition of the layers of Neckrock soils are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown loam

Subsoil:
9 to 17 inches, brown and yellowish brown loam
17 to 27 inches, yellowish brown and dark yellowish brown cobbly loam

Substratum:
27 to 32 inches, brown very gravelly loam
32 inches, dark gray limestone bedrock

The typical sequence, depth, and composition of the layers of Summerville soils are as follows—

Surface layer:
0 to 5 inches, very dark grayish brown loam

Subsoil:
5 to 12 inches, brown loam
12 inches, dark gray limestone bedrock

Included with this unit in mapping are about 5 percent somewhat poorly drained Ogdensburg soils on slightly concave positions of the landscape. About 5 percent of this unit consist of very deep Grenville and Hogansburg soils on footslopes and in areas of highly weathered bedrock. Also included are small areas of somewhat poorly drained Malone and very poorly drained Runeberg soils along toe slopes and drainageways. Small areas of Benson soils are included in areas having calcareous shale bedrock. Small areas that are very shallow to limestone bedrock are also included. Inclusions make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties of the Neckrock soils—

Permeability: moderate in the mineral surface and upper subsoil, and moderate or moderately slow in the lower subsoil and substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock depth
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Soil Properties of the Summerville soils—

Permeability: moderate throughout the mineral soil
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock depth
Shrink-swell potential: low
Depth to bedrock: 10 to 20 inches

Most areas of this soil are used as woodland or reverting to brush.

This unit tends to be poorly suited to cultivated crops and hay. In areas of rock outcrops and Summerville soils, excessive wear on machinery is probable. Erosion can be a serious problem, especially on shallow Summerville soils, and may result in significant loss of soil productivity. Maintaining vegetative cover on this unit will help conserve topsoil. Conservation tillage systems, crop rotation, and the use of cover crops are good management practices.

This unit is poorly suited to pasture. Rock outcrops discourage use of equipment for pasture improvements and management. Erosion can be a serious management concern on heavily traveled areas of this unit. Avoiding excessive grazing will help prevent significant sheet and gully erosion. Key pasture species are at risk from weed competition where grazing is left unchecked. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this unit is moderate. There is a moderate risk of seedling mortality in the shallow Summerville soils because of the very low available water capacity. Selecting varieties which are tolerant of dry soil conditions and planting in moist soil are ways to improve seedling survival. There is a severe risk of windthrow on this unit. Planting trees that are normally shallow rooted while minimizing clearcutting operations can reduce the windthrow potential.

The main limitation if this unit is used as a site for dwellings is the depth to bedrock. Areas of deeper inclusions or adjacent units of soils such as Grenville may be better suited. Dwellings with basements can be built on or above bedrock and then landscaped with additional fill.

The main limitation if this unit is used as a site for local roads and streets is the depth to bedrock. Where rock is encountered, blasting is commonly needed to allow for proper grading and smoothing. Planning road grades and locations to avoid removal of bedrock will help reduce construction costs.

The main limitation if this unit is used as a site for septic tank absorption fields is depth to bedrock. Also, in areas of Neckrock soils, the lower part of the profile has moderately slow permeability. There is a possible risk of septic effluent seeping into the water supply. A better suited site should be considered for this use. If this unit is used, alternative designs that increase the absorptive and filtering capacity of the system will be needed.

The main limitation if this unit is used as a site for shallow excavations is the depth to bedrock. Digging will be difficult because of the hard limestone bedrock which generally requires blasting for removal. Selecting deeper nearby soils will facilitate excavation of trenches.

The capability subclass is 6s.

NoB—Nicholville very fine sandy loam, 3 to 8 percent slopes

This very deep, gently sloping, and moderately well drained soil occurs on smooth, slightly convex areas of glacial lake plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown very fine sandy loam

Subsoil:
9 to 12 inches, dark brown very fine sandy loam
12 to 20 inches, brown very fine sandy loam with few mottles

Substratum:
20 to 30 inches, brown loamy very fine sand with common mottles
30 to 34 inches, dark brown loamy fine sand with few mottles
34 to 72 inches, grayish brown, loamy very fine sand with many mottles

Included with this soil in mapping are about 5 percent somewhat poorly drained Roundabout soils on footslopes, concave areas, and near drainageways. About 5 percent of this unit includes moderately well drained Schroon, Bombay and Hogansburg soils having loamy material with rock fragments in areas near glacial till landscapes. Small areas of somewhat poorly drained Wainola and Hailesboro soils are in concave areas and near drainageways. Small areas of nearly level and strongly sloping topography are included. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate throughout
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 18 to 24 inches deep at some time from November through May
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for hay or corn.

This soil is well suited to growing cultivated crops and hay. Erosion can be a serious management problem on long slopes which may cause lower crop yields. Cultivating along the contour of the landscape will reduce the slope limitation. Conservation tillage systems, crop rotation, contour farming, and the use of cover crops are good management practices.

This soil is well suited to pasture. Erosion can be a management problem particularly on long slopes subject to heavy grazing. Overgrazing should be avoided. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major management limitations for this use.

The main limitation if this soil is used as a site for dwellings with basements is the seasonal high water table. Foundation drains and protective coatings on basement walls will help alleviate wetness in basements. Diversion ditches and other drainage systems can also control surface water by carrying it away from foundations.

The main limitation if this soil is used as a site for local roads and streets is frost action. Providing a coarse-grained subgrade material will help reduce frost action. Adequate surface and subsurface drainage in critical areas will also decrease the potential for frost action.

The main limitation if this soil is used as a site for septic tank absorption fields is the seasonal high water table. A better suited site, such as higher spots within the map unit, should be considered for this use. A specially designed system such as the installation of a drainage system around an absorption field may remediate this limitation.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted during periods of high precipitation unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness.

The capability subclass is 2e.

NrA—Northway loamy fine sand, 0 to 3 percent slopes

This very deep and somewhat poorly drained soil occurs on nearly level sandy plains adjacent to glacial till landforms.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, very dark grayish brown loamy fine sand

Subsoil:
8 to 12 inches, brown and dark brown fine sand with few mottles
12 to 32 inches, light yellowish brown fine sand with common mottles

Substratum:
32 to 42 inches, light gray gravelly loam with many mottles
42 to 72 inches, dark gray gravelly loam with few mottles

Included with this unit in mapping are about 5 percent Massena and Appleton soils where the sandy mantle is thin or absent in the profile. About 5 percent of this unit includes somewhat poorly drained Pipestone and Junius soils in areas of deeper sand deposits. On slightly more convex positions, there are inclusions of moderately well drained Covertfalls soils. Also included are small areas similar to very poorly drained Cook soils in slight depressions and near drainageways. Some areas have a stony or very stony surface. In some places, the surface is loamy sand and sandy loam with or without gravel. Inclusions make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the surface and subsoil, and moderate or moderately slow in the substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: perched 12 to 18 inches deep at some time from November through May
Root zone: mainly to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for pasture or growing hay. Only drained areas of this soil are considered to be prime farmland in Clinton County.

This soil is moderately suited to growing cultivated crops and hay. The seasonal

high water table can delay planting in the spring and harvest in the fall. Surface and subsurface drainage will help to improve farm operation efficiency and increase crop yield. Conservation tillage systems, crop rotation, and maintenance of drainageways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table can cause significant wetness problems in barnyards and heavily traveled areas of the pasture. Forage may show stunted growth during the early part of the growing season as a result of wetness. Rotational grazing, proper stocking rates, deferred grazing, maintaining drainage structures, and yearly mowing are good management practices.

The potential productivity for growing red maple on this soil is moderate. Because of the seasonal high water table, heavy harvesting equipment can bog down in the soft ground causing deep ruts and erosion. Seedling mortality and windthrow are also moderate management problems on this soil because of restricted root growth.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area within the map unit or nearby landform. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

Moderate limitations if this soil is used as a site for local roads and streets are the seasonal high water table and potential frost action. Roads constructed on raised coarse-grained fill material with adequate drainage will generally require less maintenance costs in the long-term.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, the slow permeability in the loamy substratum, and the poor filtering ability within the sandy subsoil. A better suited site, such as higher spots within the map unit, should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered. Because of rapid permeability in the subsoil, there is a possibility of ground water contamination from septic effluent.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and its tendency to cave in. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness. The trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 3w.

NrB—Northway loamy fine sand, 3 to 8 percent slopes

This very deep and somewhat poorly drained soil occurs on gently sloping and undulating sandy plains adjacent to glacial till landforms.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, very dark grayish brown loamy fine sand

Subsoil:
8 to 12 inches, brown and dark brown fine sand with few mottles
12 to 32 inches, light yellowish brown fine sand with common mottles

Substratum:
32 to 42 inches, light gray gravelly loam with many mottles
42 to 72 inches, dark gray gravelly loam with few mottles

Included with this unit in mapping are about 5 percent moderately well drained Covertfalls soils on slightly higher knolls. About 5 percent of this unit includes

somewhat poorly drained Pipestone and Junius soils in areas of deeper sand deposits. Small areas of somewhat poorly drained Massena and Appleton soils are included where the sandy mantle is thin or absent in the profile. Also included are small areas of soils similar to the very poorly drained Cook soils in slight depressions and near drainageways. Some areas have a stony or very stony surface. In some places, the surface is loamy sand and sandy loam with or without gravel. Inclusions make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the surface and subsoil, and moderate or moderately slow in the substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: perched 12 to 18 inches deep at some time from November through May
Root zone: mainly to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for pasture or growing hay. Only drained areas of this soil are considered prime farmland in Clinton County.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and harvest in the fall. Surface and subsurface drainage will help to improve farm operation efficiency and increase crop yield. Conservation tillage systems, crop rotation, and maintenance of drainageways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table can cause significant wetness problems in barnyards and heavily traveled areas of the pasture. Forage may show stunted growth during the early part of the growing season as a result of wetness. Rotational grazing, proper stocking rates, deferred grazing, maintaining drainage structures, and yearly mowing are good management practices.

The potential productivity for growing red maple on this soil is moderate. Because of the seasonal high water table, heavy harvesting equipment may bog under soft ground conditions resulting in deep ruts and erosion. Seedling mortality and windthrow are also moderate management problems on this soil because of restricted root growth.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area within the map unit or nearby landform. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

Moderate limitations if this soil is used as a site for local roads and streets are the seasonal high water table and potential frost action. Roads constructed on raised coarse-grained fill material with adequate drainage will generally require less maintenance costs in the long-term.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, the slow permeability in the loamy substratum, and the poor filtering ability within the sandy subsoil. A better suited site should be considered for this use. Higher spots within the map unit will likely be better sites. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered. Because of rapid permeability in the subsoil, there is a possibility of ground water contamination from septic effluent.

The main limitations if this soil for shallow excavations are the seasonal high water table and its tendency to cave in. Digging operations may be restricted to the drier

periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness. The trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 3w.

OcA—Occur loamy sand, 0 to 3 percent slopes

This very deep, nearly level, and moderately well drained soil is on sandy plains adjacent to glacial till landforms.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 6 inches, very dark grayish brown loamy sand

Subsoil:
6 to 8 inches, brown loamy sand
8 to 13 inches, strong brown loamy sand
13 to 21 inches, yellowish brown cobbly loamy sand

Substratum:
21 to 29 inches, brown loamy sand with few mottles
29 to 72 inches, grayish brown loam with many mottles

Included with this soil in mapping are about 5 percent Adams and Croghan soils on slightly convex positions where sandy deposits are over 40 inches deep. About 5 percent of this map unit includes somewhat poorly drained Coveytown and Wainola soils and very poorly drained Cook soils along drainageways and in slight depressions. Also included are Flackville soils where silt and clay exist within 40 inches of the surface. Schroon, Kalurah, or Hogansburg soils are included where the sandy subsoil is absent. In some places, the surface is loamy sand or sandy loam with or without gravel. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the surface, subsoil and upper substratum; and moderate or moderately slow in the lower substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: perched 18 to 30 inches deep at some time from November through May
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for hay or woodland. Some areas are cultivated for corn or used as pasture. This soil qualifies as prime farmland in Clinton County.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table may delay planting and harvesting operations during periods of heavy precipitation. Installation of drainage, especially in areas of somewhat poorly drained inclusions, will aid in farm operation efficiency. During extended dry periods, droughtiness may occur particularly in areas of Adams and Croghan soil inclusions where available water is lower. Conservation tillage systems, crop rotation, and the use of cover crops are good management practices.

This soil is well suited to pasture. Periods of droughtiness may threaten optimal forage production on this soil. Overgrazing should be avoided. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is very high. Seedling mortality may be a management problem with some tree species because of droughtiness, especially within included areas of Adams soils.

The main limitation if this soil is used as a site for dwellings with basements is the seasonal high water table. A better suited site on slightly higher positions, such as the included Adams soils should be considered. If this map unit is used, foundation drains and protective coatings on basement walls will help alleviate wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

Moderate limitations if this soil is used as a site for local roads and streets are frost action and the seasonal high water table. Construction plans that specify use of coarse-grained subgrade material will increase road durability from potential frost action. Adequate drainage in critical areas will also decrease frost action and wetness.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, the poor filtering capacity of the sandy subsoil, and the moderately slow permeability in the loamy substratum. A better suited site should be considered for this use. High spots within the map unit will likely be better sites. Conventional septic system designs will perform poorly on this soil. Alternative systems that augment the filtering capacity of this system should be considered. Because of rapid permeability in the subsoil, there is a possibility of ground water contamination from improperly treated effluent.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and tendency of the soil to cave in. Digging operations may be restricted during periods of heavy precipitation unless drainage is installed. Sloughing of soil in the excavated area may also occur in the spring or other wet periods. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 2w.

OcB—Occur loamy sand, 3 to 8 percent slopes

This very deep, gently sloping, and moderately well drained soil is on sandy plains and slightly convex areas adjacent to glacial till landforms.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 6 inches, very dark grayish brown loamy sand

Subsoil:
6 to 8 inches, brown loamy sand
8 to 13 inches, strong brown loamy sand
13 to 21 inches, yellowish brown cobbly loamy sand

Substratum:
21 to 29 inches, brown loamy sand with few mottles
29 to 72 inches, grayish brown loam with many mottles

Included with this soil in mapping are about 5 percent Adams and Croghan soils on slightly more convex positions where sandy deposits are over 40 inches deep. About 5 percent of this map unit are somewhat poorly drained Coveytown and Wainola soils and very poorly drained Cook soils along drainageways and in slight depressions. Also included are Flackville soils where silt and clay exist within 40 inches of the surface. Schroon, Kalurah, or Hogansburg soils are included where the sandy subsoil is absent. In some places, the surface is loamy sand or sandy loam with or without

gravel. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the surface, subsoil, and upper substratum; and moderate or moderately slow in the lower substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: perched 18 to 30 inches deep at some time from November through May
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for hay and woodland. Some areas are cultivated for corn or used as pasture. This soil qualifies as prime farmland in Clinton County.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table may delay planting and harvesting operations during periods of heavy precipitation. Installation of drainage, especially in areas of somewhat poorly drained inclusions, will aid in farm operation efficiency. During extended dry periods, droughtiness may occur particularly in areas of Adams and Croghan soil inclusions where available water is lower. Conservation tillage systems, crop rotation, and the use of cover crops are good management practices.

This soil is well suited to pasture. Periods of droughtiness may threaten optimal forage production on this soil. Overgrazing should be avoided. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is very high. Seedling mortality may be a management problem with some tree species because of droughtiness, especially within included areas of Adams soils.

The main limitation if this soil is used as a site for dwellings with basements is the seasonal high water table. A better suited site on slightly higher positions like included Adams soils should be considered. If this map unit is used, foundation drains and protective coatings on basement walls will help alleviate wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

Moderate limitations if this soil is used as a site for local roads and streets are frost action and the seasonal high water table. Construction plans that specify use of coarse-grained subgrade material will promote road surface durability. Adequate drainage in critical areas will also decrease the potential for frost action and wetness.

The main limitations if this map unit is used as a site for septic tank absorption fields are the seasonal high water table, the poor filtering capacity of the sandy subsoil, and the moderately slow permeability in the loamy substratum. A better suited site, such as higher spots within the map unit, should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative systems that augment the filtering capacity of this system should be considered. Because of rapid permeability in the subsoil, there is a possibility of ground water contamination from improperly treated effluent.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the tendency of the soil to cave in. Digging operations may be restricted during periods of heavy precipitation unless drainage is installed. Sloughing of soil in the excavated area may also occur in the spring or other wet periods. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 2w.

OgB—Ogdensburg silt loam, 0 to 8 percent slopes

This moderately deep, nearly level to gently sloping, and somewhat poorly drained soil is on slightly concave or undulating areas of bedrock-controlled glacial till.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown silt loam

Subsoil:
9 to 15 inches, brown loam with few mottles
15 to 26 inches, grayish brown gravelly loam with many mottles

Substratum:
26 to 32 inches, brown gravelly loam with few mottles
32 to 38 inches, light olive brown very gravelly loam
38 inches, dark gray limestone bedrock

Included with this soil in mapping are about 5 percent well drained Neckrock soils on slightly higher positions. About 5 percent of this map unit consists of well drained, shallow Summerville soils on high areas of the unit and near rock outcrops. Small areas of poorly drained, moderately deep soils formed in clay and silt deposits make up about 5 percent of this unit. Small areas of soils similar to Ogdensburg but shallow to bedrock are included. Also included are small areas of medium-lime Topknot soils. In some areas the texture is loam or fine sandy loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate or moderately rapid throughout
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: perched 12 to 18 inches deep at some time from November through May.
Root zone: mainly to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Most areas of this soil are used for woodland or unimproved pasture. Only drained areas of this soil qualify as prime farmland.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and harvest in the fall. Surface and subsurface drainage will help to improve farm operation efficiency and increase crop yield. In some areas, installation of subsurface drainage may be limited by the moderate depth to bedrock. Conservation tillage systems, crop rotation, and maintenance of waterways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table may limit the growth of forage plants. Selecting plants which are tolerant of wet soil conditions will help sustain the quality and quantity of forage. Excessive grazing on this map unit when the soil is wet and soft increases compaction and subsequent loss of desired plant species. Rotational grazing, proper stocking rates, maintenance of drainageways, and yearly mowing are good management practices.

The potential productivity for growing red maple on this soil is high. Heavy harvesting equipment may bog down causing deep ruts and erosion during wet periods. Rooting depth is also limited by the seasonal high water table which results in stunted seedling growth and windthrow for some tree species. Selecting species tolerant of wet soil conditions will help increase seedling survival and timber productivity.

The main limitations if this soil is used as a site for dwellings with basements are the seasonal high water table and the depth to bedrock. Nearby better drained, deeper soils will likely be better sites. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the foundation. Dwellings with basements can be built above bedrock and landscaped with additional fill.

The main limitation if this soil is used as a site for local roads and streets is frost action. Constructing roads on a raised bed of coarser-grained material and providing adequate drainage will decrease the potential for damage from frost action.

The main limitations if this soil is used as a site for septic tank absorption fields are depth to bedrock and the seasonal high water table. A better-drained site with deeper soils should be considered for this use. Alternative designs that augment the absorptive and filtering capacity of the system will be needed.

The main limitations if this soil is used as a site for shallow excavations are the depth to bedrock and the seasonal high water table. Digging will be difficult because of hard limestone bedrock, and will necessitate blasting in most areas. Selecting deeper soils for excavations may significantly reduce costs. Digging operations may be restricted to the drier periods of the year unless a drainage system is installed.

The capability subclass is 3w.

PeA—Peasleeville loam, 0 to 3 percent slopes

This very deep and somewhat poorly drained soil is on a nearly level or slightly depressional area of upland glacial till plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 7 inches, very dark gray loam
7 to 11 inches, very dark grayish brown gravelly loam

Subsoil:
11 to 22 inches, brown and dark brown gravelly fine sandy loam with common mottles
22 to 32 inches, brown and dark brown gravelly loam with few mottles
32 to 42 inches, dark grayish brown gravelly loam with common mottles

Substratum:
42 to 72 inches, dark grayish brown and dark yellowish brown gravelly loam with few mottles

Included with this soil in mapping are about 5 percent moderately well drained Schroon soils on slightly higher and more convex positions within the map unit. About 5 percent of this unit consist of poorly drained Lyonmounten soils and very poorly drained Runeberg and Sabattis soils in low areas and depressions. Also included are about 5 percent soils similar to Adirondack soils which have a more reddish brown subsoil and a dense substratum. Inclusions of Peasleeville soils with a very stony surface are often in small areas of brush or woodland. Small areas of moderately deep Chazy soils are also included. Included soils make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate throughout the profile
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 12 to 18 inches deep at some time from November through May
Root zone: mainly to 20 inches deep

Shrink swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for hay or pasture. Some areas are reverting to brush. Only drained areas of this soil qualify as prime farmland.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and harvest in the fall. Surface and subsurface drainage will help to improve farm operation efficiency and increase crop yield. Conservation tillage systems, crop rotation, maintenance of drainageways, and the use of cover crops are good management practices.

This soil is moderately suited to pasture. The seasonal high water table may limit the growth of forage plants. Selecting plants which are tolerant of wet soil conditions will help sustain the quality and quantity of forage. Excessive grazing on this soil when the ground is wet and soft increases compaction and loss of desired plant species. Rotational grazing, proper stocking rates, maintenance of drainageways, and yearly mowing are good management practices.

The potential productivity for growing red maple on this soil is moderate. Maneuvering heavy equipment may be difficult because of the soft ground conditions during wet periods. Rooting depth is limited by the seasonal high water table. Shallow roots may restrict seedling growth and result in windthrow in some areas of this soil. Selecting tree species tolerant of wet soil conditions will help increase seedling survival and reduce windthrow.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. Better-drained soils on higher inclusions or nearby units should be considered for this use. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the foundation.

The main limitation if this soil is used as a site for local roads and streets is frost action. Constructing roads on a raised bed of coarser-grained material and providing adequate drainage will decrease the potential for damage from frost action.

The main limitation if this soil is used as a site for septic tank absorption fields is the seasonal high water table. A better-suited site should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless a drainage system is installed.

The capability subclass is 3w.

PeB—Peasleeville loam, 3 to 8 percent slopes

This very deep, gently sloping, and somewhat poorly drained soil is on toeslopes and slight depressions of upland till plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 7 inches, very dark gray loam
7 to 11 inches, very dark grayish brown gravelly loam

Subsoil:
11 to 22 inches, brown and dark brown gravelly fine sandy loam with common mottles
22 to 32 inches, brown and dark brown gravelly loam with few mottles
32 to 42 inches, dark grayish brown gravelly loam with common mottles

Substratum:
42 to 72 inches, dark grayish brown and dark yellowish brown gravelly loam with few mottles

Included with this soil in mapping are about 5 percent moderately well drained Schroon soils on slightly higher areas of the map unit. About 5 percent of this unit consist of poorly drained Lyonmounten, and very poorly drained Runeberg and Sabattis soils in low areas and depressions. Also included are about 5 percent soils similar to the somewhat poorly drained Adirondack soils which have a more reddish brown subsoil and a more dense substratum. Inclusions of Peasleeville soils with a very stony surface occur in small areas of brush or woodland. Small areas of moderately deep Chazy soils are also included. Included soils make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate throughout
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 12 to 18 inches deep at some time from November through May
Root zone: mainly to 20 inches deep
Shrink swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for hay or pasture. Some areas are reverting to brush. Only drained areas of this soil qualify as prime farmland.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and harvest in the fall. Surface and subsurface drainage will help to improve farm operation efficiency and increase crop yield. Erosion may occur on long, gently sloping sections of cultivated land if the soil is left unprotected by vegetative cover. Conservation tillage systems, crop rotation, maintenance of drainageways, and the use of cover crops are good management practices.

This soil is moderately suited to pasture. The seasonal high water table may limit the growth of forage plants in the spring. Selecting plants which are tolerant of wet soil conditions will help sustain the quality and quantity of forage. Excessive grazing on this soil when the ground is wet and soft increases compaction of the surface layer and loss of desired plant species. Rotational grazing, proper stocking rates, maintenance of drainageways, and yearly mowing are good management practices.

The potential productivity for growing red maple on this soil is moderate. Maneuvering heavy equipment may be difficult on this soil because of the soft ground conditions during wet periods. Rooting depth is limited by the seasonal high water table. Shallow roots may restrict seedling growth and result in windthrow in some areas of this soil. Selecting tree species tolerant of wet soil conditions will help increase seedling survival and reduce windthrow.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. Better-drained inclusions or nearby units should be considered for this use. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Constructing roads on a raised bed of coarser-grained material and providing adequate drainage will decrease the potential for damage from frost action.

The main limitation if this soil is used as a site for septic tank absorption fields is the seasonal high water table. A better suited site should be considered for this use.

Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless a drainage system is installed.

The capability subclass is 3w.

PfB—Peasleeville loam, gently sloping, very stony

This very deep and somewhat poorly drained soil is on toeslopes and slightly depressional areas of upland till plains. Large stones cover up to 3 percent of the soil surface. Slopes range from 0 to 8 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 7 inches, very dark gray loam
7 to 11 inches, very dark grayish brown gravelly loam

Subsoil:
11 to 22 inches, brown and dark brown gravelly fine sandy loam with common mottles
22 to 32 inches, brown and dark brown gravelly loam with few mottles
32 to 42 inches, dark grayish brown gravelly loam with common mottles

Substratum:
42 to 72 inches, dark grayish brown and dark yellowish brown gravelly loam with few mottles

Included with this soil in mapping are about 5 percent moderately well drained Schroon soils on slightly higher areas of the map unit. About 5 percent of this unit consist of poorly drained Lyonmounten, and very poorly drained Runeberg and Sabattis soils in low areas and depressions. Also included are about 5 percent somewhat poorly drained Adirondack soils which have a reddish brown subsoil and a more dense substratum. Inclusions of Peasleeville soils with few or no surface stones are often in small cleared areas (fig. 17). Small areas of moderately deep Chazy soils are also included. Included soils make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate throughout
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 12 to 18 inches deep at some time from November through May
Root zone: mainly to 20 inches deep
Shrink swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for woodland or brush. Some areas are used for unimproved pasture.

This soil is poorly suited to growing cultivated crops and hay. Large surface stones are an obstruction to effective management and cause excessive wear on machinery. Stone clearing is necessary to accommodate farm machinery use and to avoid significant damage and wear.

This soil is poorly suited to pasture. Large stones covering the surface inhibit yearly mowing and other maintenance practices. Overgrazing may lead to muddying of the surface during wet periods and loss of desired forage plants. Avoiding

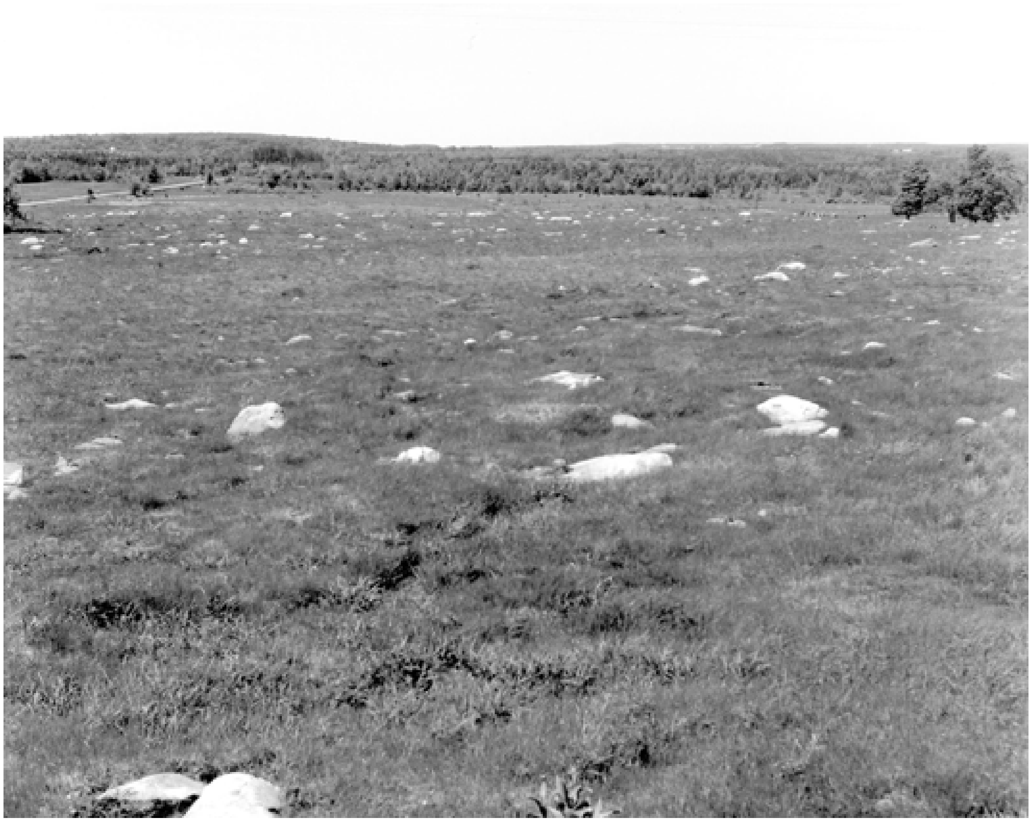

Figure 17. —An area of pasture showing very stony and bouldery surface conditions on Schroon and Peasleeville soils. Peasleeville soils occur in the slight depression near the center of the photograph leading into the trees at the right.

excessive grazing will help sustain key plant species. Stone removal, rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing red maple on this soil is moderate. Maneuvering heavy equipment may be difficult because of the soft ground conditions during wet periods. Rooting depth is limited by the seasonal high water table. Shallow roots may restrict seedling growth and result in windthrow in some areas of this soil. Selecting species tolerant of wet soil conditions will help increase seedling survival and reduce windthrow.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. Better-drained inclusions or nearby units should be considered for this use. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the foundation.

The main limitation if this soil is used as a site for local roads and streets is frost action. Constructing roads on a raised bed of coarser-grained material and providing adequate drainage will decrease the potential for damage from frost action.

The main limitation if this soil is used as a site for septic tank absorption fields is the seasonal high water table. A better-suited site should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless drainage is installed.

The capability subclass is 6s.

Pg—Pinconning mucky loamy fine sand

This very deep and very poorly drained soil is in low areas on broad plains and in depressions. Slopes range from 0 to 2 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark brown mucky loamy fine sand

Substratum:
9 to 11 inches, gray fine sand with few mottles
11 to 22 inches, light gray and grayish brown fine sand with few mottles
22 to 36 inches, gray loamy fine sand with common mottles
36 to 60 inches, dark gray varved silt loam and silty clay with common mottles
60 to 72 inches, dark gray silty clay with common mottles

Included with this soil in mapping are about 5 percent moderately well drained Flackville soils and somewhat poorly drained Swanton soils. These soils are on slightly higher positions on the landscape. About 5 percent of this map unit are somewhat poorly drained Sciota and poorly drained Deinache soils where sand deposits are deeper. Also included are Wonsqueak soils in places with moderately thick organic deposits, and similar soils with loamy subsoil or silt loam substratum layers. Inclusions make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the surface and sandy upper substratum, and slow or very slow in the lower clayey substratum
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: perched 12 inches above the surface to 12 inches below the surface at some time from October through May
Root zone: mainly to 12 inches deep
Shrink-swell potential: low in the surface and sandy substratum, and high in the clayey substratum
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland.

This soil is poorly suited to growing cultivated crops and hay because of ponding and the seasonal high water table. The surface is covered by water during part of the growing season. Drainage is often difficult or expensive to install on this soil without draining fragile wetland because of poor outlets. Important wetland habitat may be lost as a result of lowering the water table.

This soil is poorly suited to pasture. Ponding and wetness during the growing season seriously limit forage growth. Also, the impact of livestock traffic will damage forage and destroy important soil structure needed for good root growth. Deferred grazing, rotational grazing, proper stocking rates, and yearly mowing when possible, are good management practices.

The potential productivity for growing quaking aspen on this soil is moderate. Because of the seasonal high water table, seedling mortality is severe for many important timber species. Windthrow hazard is also severe because of restricted root growth. Saturated soil conditions cause severe load restrictions for heavy equipment.

The main limitations if this soil is used as a site for dwellings are ponding and the high shrink-swell potential of the clayey substratum. A better-suited site should be considered such as a higher area on the map unit. If this soil is used, an extensive drainage system will be needed to control wetness.

The main limitations if this soil is used as a site for local roads and streets are ponding and a high shrink-swell potential in the substratum. Construction plans should call for providing coarser-grained subgrade material. Adequate surface and subsurface drainage will also decrease wetness and instability.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, the slow permeability in the clayey substratum, and the poor filtering capacity of the sandy subsoil. A better suited site should be selected for this use.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and ponding. Digging operations will be restricted to summer unless drainage is provided. Sloughing of soil in the excavated area will also occur during months of the seasonal high water tables. Trench walls should be mechanically supported to prevent possible collapse.

The capability subclass is 5w when the soil is undrained, and 3w when drained.

Ph—Pipestone fine sand

This very deep, nearly level and somewhat poorly drained soil is on broad areas of sand plains. Slopes range from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 5 inches, brown fine sand

Subsurface layer:
5 to 7 inches, pale brown fine sand

Subsoil:
7 to 19 inches, brown fine sand with common mottles
19 to 26 inches, light yellowish brown sand with common mottles

Substratum:
26 to 72 inches, brown sand

Included with this soil in mapping are about 5 percent moderately well drained Covert soils and excessively drained Grattan soils on higher, slightly convex positions. About 5 percent of this map unit consists of somewhat poorly drained Northway soils in similar positions but having a loamy substratum at 20 to 40 inches deep. Also in this unit are small areas of somewhat poorly drained Shaker and Junius soils in similar positions. Junius soils are not as red in the subsoil as Pipestone soils. Shaker soils consist of loamy material over clay. Other soils included in this unit are the very poorly drained Cook and poorly drained Gougeville soils in depressions. Cook soils have a loamy substratum between 20 to 40 inches deep, Gougeville soils have a thicker and darker surface horizon. Inclusions make up about 20 percent of this map unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: 12 to 18 inches deep at some time from October through June
Root zone: mainly to 18 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for hay or woodland.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table will delay planting in the spring and harvest in the fall without adequate drainage. Surface and subsurface drainage can significantly increase productivity and improve essential farm operations. Conservation tillage systems, crop rotation, maintenance of drainageways, and the use of cover crops are good management practices.

This soil is moderately suited to pasture. The seasonal high water table causes wet conditions during part of the growing season. Heavily grazed parts of the pasture often become muddy with stunted forage growth. Key species that are tolerant to wet conditions should be established for pasture. Rotational grazing, proper stocking rates, deferred grazing, maintenance of drainageways, and yearly mowing are good pasture management practices.

The potential productivity for growing red maple on this soil is moderate. Because of the seasonal high water table, heavy equipment may bog down causing deep ruts and topsoil erosion. Harvest operations will therefore be most efficient on frozen ground and during summer. Windthrow may also occur because of restricted root growth.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site may exist nearby or on a Grattan soil inclusion. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the foundation.

Moderate limitations if this soil is used as a site for local roads and streets are the seasonal high water table and frost action. To minimize these limitations, roads can be constructed on raised sand and gravel fill material with an adequate drainage system installed.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the poor filtering capacity of the sandy texture. A better suited site should be considered for this use such as a more moderately permeable soil on a higher position of the landscape. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered. Because of the rapid permeability, there is a possibility of ground water contamination using conventional systems.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the tendency of the soil to cave in. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness. Trench walls can be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 3w.

Pn—Pits, gravel

This very deep, excessively drained to well drained map unit consists of areas from which gravel and sand have been removed for construction purposes. Generally, the perimeter of the pit is steep. Although its floor tends to be nearly level, piles of gravel are common. Dominantly, slopes range from 0 to 3 percent.

Gravel pits are generally devoid of vegetation; however, some abandoned sites support a few trees, bushes, and grasses. A typical sequence, depth, and composition of the layers of this map unit are not provided because of the variability in associated soils.

Included with this map unit are small areas of undisturbed Colton, Colosse, Trout River, and Waddington soils. Also, small areas of ponded water and areas of

somewhat poorly drained and poorly drained soil material are included in concave areas of the pit floor. Included areas make up about 10 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: generally rapid throughout; however, on-site investigation is needed
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: usually greater than 72 inches deep except in areas where the pit was dug down to the water table; onsite investigation is needed
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches; onsite investigation is needed

Because of steep side-walls and low available water capacity, this unit is not suited to growing cultivated crops and pasture unless reclaimation occurs. Even with reclamation, this unit will be droughty in most places. Reclamation includes smoothing, grading, replacing topsoil, fertilizing and liming to establish a sod crop. To avoid excessive wear on cultivating and planting equipment, topsoil can be added to cover the residual material containing gravel.

After reclamation, the potential productivity of this unit for growing eastern white pine is high. The low available water capacity and steep side slopes are important limitations to woodland management. Reclamation will be necessary to improve productivity for most tree species. Drought tolerant trees should be considered for planting.

The variability of the characteristics of this unit make onsite investigation necessary to determine the suitability of this unit for community development. Because of the rapid permeability, waste disposal of any type can result in ground water contamination.

This unit is not assigned a capability subclass.

Po—Pits, quarry

This very shallow or shallow, and excessively drained to well drained map unit consists of a mined area from which soil material and bedrock have been removed for construction purposes. Generally the side-walls of the pit are very steep and the floor is nearly level. Slopes range from 0 to 100 percent.

Quarries are generally devoid of vegetation; however, some abandoned sites support a few trees, bushes, and grasses. A typical sequence, depth, and composition of the layers of this map unit are not provided because of the variability of associated soils.

Included with this map unit in mapping are small areas of well drained Neckrock, Summerville, Gardenisle and Benson soils in undisturbed areas of limestone and calcareous shale bedrock. Small areas of Tunbridge, Lyman, Ricker, Irona and Conic soils are included in undisturbed areas of granitic or sandstone bedrock. Also, small areas of flooded quarry and small areas of somewhat poorly and poorly drained soils are included in concave areas of the pit floor. Included areas make up about 10 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: onsite investigation is needed
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: generally greater than 72 inches deep; however, onsite investigation needed

Root zone: to the depth of bedrock
Shrink-swell potential: low
Depth to bedrock: variable; dominantly less than 10 inches; onsite investigation needed

Because of the depth to bedrock, the steep side-walls, and the low available water capacity, this map unit is not suited to growing cultivated crops and pasture. Even after reclamation, this unit will be droughty. Reclamation includes grading, smoothing, replacing topsoil, fertilizing and liming to establish a sod crop.

The potential productivity if this unit is used as a site for growing timber is generally low because of very low available water capacity, depth to bedrock and steep side-walls. Reclamation will be necessary to improve productivity on this unit. Drought-tolerant trees should be considered for planting. Windthrow is a potential problem because of the restricted root zone above the bedrock contact. Onsite investigation is needed.

Because of the variability of soil characteristics of this unit, onsite investigation will be necessary to determine the suitability for community development.

This unit is not assigned a capability subclass.

Pp—Pits, sand

This very deep, excessively drained to well drained map unit consists of areas from which sand has been removed for construction purposes. Slopes are dominantly 0 to 3 percent except for steep areas like side-walls.

Sand pits are generally devoid of vegetation; however, some abandoned sites support a few trees, bushes, and grasses. A typical sequence, depth, and composition of the layers of this map unit are not provided because of the variability of associated soils.

Included with this soil in mapping are small undisturbed areas of Adams, Champlain, Grattan, and Plainfield soils. Also, small ponded areas and small areas of somewhat poorly drained and poorly drained soils are included in concave areas of the pit floor. Included areas make up about 10 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid throughout; onsite investigation is needed
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: usually greater than 72 inches deep, except in areas where the pit was excavated to the water table; onsite investigation is needed
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches; onsite investigation is needed

Because of the steep side-walls and the low available water capacity, this unit is not suited to growing cultivated crops and pasture unless reclaimed. Even with reclamation, this unit will be droughty. Reclamation includes grading, smoothing, replacing topsoil, fertilizing, and liming to establish a sod crop.

The potential productivity if this unit is used for growing eastern white pine is generally high after reclamation. The low available water capacity and steep side-walls are important management limitations. Reclamation will be necessary to improve productivity for most species of trees. Drought tolerant trees should be considered for planting.

The variability of the characteristics of this unit make onsite investigation necessary to determine the suitability of this unit for community development.

Because of the rapid permeability, waste disposal of any type can result in ground water contamination.

This unit is not assigned a capability subclass.

PtA—Plainfield loamy sand, 0 to 3 percent slopes

This very deep, nearly level, and excessively drained soil occurs on glacial outwash plains, deltas, and terraces.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, very dark grayish brown loamy sand

Subsoil:
8 to 17 inches, dark yellowish brown sand
17 to 23 inches, yellowish brown sand

Substratum:
23 to 38 inches, yellowish brown sand
38 to 72 inches, pale brown sand

Included with this soil in mapping are about 7 percent excessively drained Grattan soils having a more reddish brown subsoil and being intermixed in this unit. About 5 percent of this unit are moderately well drained Deerfield and Covert soils on slightly concave areas and near drainageways. Small areas of a soil similar to Colton soils are included in more gravelly places. Moderately well drained Covertfalls soils are included where sands overly a loamy substrata within 60 inches of the surface. In some areas, the surface texture is sand, loamy fine sand and sandy loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland. Some areas are used as cropland or pasture, or recreation and community development.

This soil is moderately suited to growing cultivated crops and hay. Droughtiness can be a limiting factor in the productivity of this soil because of the low available water capacity. Amendments of organic matter will improve the moisture holding ability. Because of the rapid permeability, the leaching of pesticides and plant nutrients is a management concern. Conservation tillage systems, crop rotation, applications of manure according to crop nutrient needs, and the use of cover crops are good management practices.

This soil is moderately suited to pasture. Droughtiness during the summer can threaten optimal forage density. Pasture plants that are tolerant to dry soil conditions should be encouraged. Overgrazing will reduce potential forage production and enhance competition from weed species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is very high. Seedling mortality may be severe because of the droughty conditions. Planting

drought-tolerant species during moist soil conditions will improve survival rates. These seedlings can grow well if competing vegetation is controlled.

There are no major limitations if this soil is used as a site for dwellings with or without basements.

There are no major limitations if this soil is used as a site for local roads and streets.

The main limitation if this soil is used as a site for septic tank absorption fields is the soil's poor ability to filter effluent properly. A better-suited site should be considered for this use such as a nearby soil with moderately rapid permeability. Because of the rapid permeability, there is a possibility of ground water contamination. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the tendency of the soil to cave in. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 3s.

PtB—Plainfield loamy sand, 3 to 8 percent slopes

This very deep, gently sloping, and excessively drained soil occurs on sandy glacial outwash plains, deltas, and terraces.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, very dark grayish brown loamy sand

Subsoil:
8 to 17 inches, dark yellowish brown sand
17 to 23 inches, yellowish brown sand

Substratum:
23 to 38 inches, yellowish brown sand
38 to 72 inches, pale brown sand

Included with this soil in mapping are about 7 percent excessively drained Grattan soils having a more reddish brown subsoil than Plainfield soils. About 5 percent of this unit are moderately well drained Deerfield and Covert soils on slightly concave areas and near drainageways. Small areas of a soil similar to Colton soils are included in more gravelly places. Small areas of moderately well drained Occur soils are included where sandy deposits overly loamy substrata. In some areas, the surface texture is sand, loamy fine sand, and sandy loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland. Some areas are used as cropland or pasture.

This soil is moderately suited to growing cultivated crops and hay. Droughtiness can limit crop productivity because of this map unit's low available water capacity. Amendments of organic matter will improve the moisture holding ability. Because of

the rapid permeability, the potential for pesticides and plant nutrients leaching in this soil is high. Conservation tillage systems, crop rotation, applying manure according to crop nutrient needs, and the use of cover crops are good management practices.

This soil is moderately suited to pasture. Droughtiness during the summer can threaten optimum forage. Key pasture plants that are tolerant to dry soil conditions should be encouraged. Overgrazing will reduce potential forage production and enhance competition from weed species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is very high. Seedling mortality may be severe because of droughty conditions. Planting drought-tolerant species during moist soil conditions will improve survival rates. Seedlings can grow well if competing vegetation is controlled.

There are no major limitations if this soil is used as a site for dwellings with or without basements.

There are no major limitations if this soil is used as a site for local roads and streets.

The main limitation if this map unit is used as a site for septic tank absorption fields is the soil's poor ability to filter effluent properly. A better-suited site should be considered such as a nearby soil with more moderately rapid permeability. Because of rapid permeability, there is a possibility of ground water contamination. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitations if this soil is used as a site for shallow excavations is the tendency of the soil to cave in. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 3s.

PtC—Plainfield loamy sand, 8 to 15 percent slopes

This very deep, strongly sloping, and excessively drained soil occurs on sandy glacial outwash plains, deltas, and terraces.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, very dark grayish brown loamy sand

Subsoil:
8 to 17 inches, dark yellowish brown sand
17 to 23 inches, yellowish brown sand

Substratum:
23 to 38 inches, yellowish brown sand
38 to 72 inches, pale brown sand

Included with this soil in mapping are about 7 percent excessively drained Grattan soils having a more reddish brown subsoil than Plainfield soil. About 5 percent of this unit includes soils that are similar to Colton soils having more gravelly layers than typical for Plainfield soils. Small areas of moderately well drained Covertfalls soils are included where sandy deposits overlay loamy substrata. In some areas, the surface texture is sand, loamy fine sand, and sandy loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: greater than 72 inches deep

Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland.

This soil is poorly suited to growing cultivated crops and hay. It has a greater erosion potential when cultivated and left fallow than lesser sloping map units. Droughtiness can limit crop productivity because of the low available water capacity. Amendments of organic matter will improve the moisture holding ability of this soil. Because of the rapid permeability, the potential for pesticides and plant nutrients leaching in this soil is high. Conservation tillage systems, stripcropping, crop rotation, timely applications of manure, and the use of cover crops are good management practices.

This soil is moderately suited to pasture. Droughtiness can threaten optimum forage. Key pasture plants that are tolerant to dry conditions should be encouraged. Overgrazing will reduce potential forage production, increase erosion, and enhance competition from weed species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing eastern white pine on this soil is very high. Seedling mortality may be severe because of the droughty conditions. Planting drought-tolerant species during moist soil conditions will increase survival rates. These seedlings can grow well if competing vegetation is controlled. Operating equipment may be slightly more difficult and costly than on less sloping areas.

The main limitation if this soil is used as a site for dwellings is slope. These strongly sloping areas may require some grading and landscaping expenses. Design of the dwelling should conform to the natural slope to reduce costs.

The main limitation if this soil is used as a site for local roads and streets is the strongly sloping topography. Constructing roads along the contour will reduce the slope limitation.

The main limitation if this soil is used as a site for septic tank absorption fields is the soil's poor ability to filter effluent properly. A better suited site should be considered for this use such as a soil with moderately rapid permeability. Because of the rapid permeability, there is a possibility of ground water contamination. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitations if this soil is used as a site for shallow excavations is the tendency of the soil to cave in. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 4e.

PvF—Plainfield and Grattan soils, very steep

This very deep, excessively drained soils is on steep to very steep side slopes. Some areas consist mostly of Plainfield soils, some mostly of Grattan soils, and some of both. In general, this unit is about 45 percent Plainfield soils, 45 percent Grattan soils, and 10 percent other soils. The Plainfield and Grattan soils were mapped together because they have no major differences in use and management. Slopes range from 25 to 70 percent.

The typical sequence, depth, and composition of the layers of the Plainfield soils are as follows—

Surface layer:
0 to 8 inches, very dark grayish brown loamy sand

Subsoil:
8 to 17 inches, dark yellowish brown sand 17 to 23 inches, yellowish brown sand

Substratum:
23 to 38 inches, yellowish brown sand
38 to 72 inches, pale brown sand

The typical sequence, depth, and composition of the layers in the Grattan soils are as follows—
Surface layer:
0 to 3 inches, black slightly decomposed organic matter
3 to 5 inches, very dark grayish brown loamy sand

Subsurface layer:
5 to 11 inches, gray sand

Subsoil:
11 to 30 inches, strong brown loamy sand
30 to 41 inches, yellowish brown sand

Substratum:
41 to 72 inches, yellowish brown sand

Included with this soil in mapping are small areas of soils similar to Colton and Hermon soils having more gravel throughout the profile. Small areas of Plainfield and Grattan soils on 15 to 25 percent slopes are included. Also included are soils similar to Bice and Grenville soils with loamy profiles. Included areas make up about 10 percent of this unit and range up to 5 acres each.

Soil Properties of the Plainfield soils—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of the Grattan soils—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are used as woodland.

The soils in this unit are not suited to growing cultivated crops and hay. These steep and very steep areas are too difficult to properly manage creating a safety hazard for workers using machinery. Because these slopes are prone to erosion, areas of this unit should be kept in permanent vegetative cover.

This unit is poorly suited to pasture. The steep and very steep slopes make proper management difficult and create a potential erosion hazard.

The potential productivity for growing eastern white pine on this unit is very high. Very steep slopes prohibit the use of most planting and harvesting equipment. Erosion is a management concern within areas of skid roads and other disturbance. Seedling mortality can be severe for some tree species because of the droughty nature of this soil unit.

The main limitation if this unit is used as a site for dwellings is slope. A better suited site on lesser sloping soils should be considered. Extensive land grading and shaping will be necessary within areas of this unit.

The main limitation if this unit is used as a site for local roads and streets is slope. If possible, this unit should be circumvented to minimize construction and maintenance costs. Roads constructed along the contour or in less sloping areas of this unit will minimize the slope limitation. Significant amounts of landscaping and grading will be needed for the surface and road banks.

The main limitations if this unit is used as a site for septic tank absorption fields are slope and the poor filtering capacity of the soil's sandy texture. A better suited site should be considered for this use. Rapid permeability may allow groundwater contamination if this unit is used for effluent disposal.

The main limitations if this unit is used as a site for shallow excavations are the very steep slopes and the tendency of the soil to cave in. Maneuvering machinery on these slopes will be very difficult and risky. Trench walls should be mechanically supported to avoid the possibility of soil falling on workers or other victims.

The capability subclass is 7e.

RoB—Rock outcrop-Ricker complex, gently sloping

This very shallow to moderately deep, and well drained soil occurs on bedrock-controlled glacial till uplands and broad mountaintops. This unit consists of about 45 percent bedrock outcrops, 35 percent Ricker soils, and 20 percent other soils. The rock outcrop and Ricker components of this unit occur in such an intricate pattern on the landscape, they were not separated in mapping. Slopes range from 0 to 8 percent.

The typical sequence, depth, and composition of the layers of the Ricker soils are as follows—

Surface layer:
0 to 3 inches, black slightly decomposed sphagnum moss, twigs and needles

Subsurface layer:
3 to 5 inches, black mucky peat
5 to 6 inches, black muck
6 to 7 inches, dark grayish brown loam
7 inches, massive crystalline bedrock

Included with this unit in mapping are about 8 percent very poorly drained Churubusco soils in depressions and at the base of bedrock-controlled benches. Small areas of somewhat poorly drained Topknot soils are included in slight depressions near the fringe of this unit. Small areas of shallow, well drained Irona soils are included on slightly convex positions where mineral soil dominates. Also, small linear areas of Colosse and Trout River soils are included in areas of very gravelly and cobbly soil material. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties of the Ricker Soils—

Permeability: moderately slow to moderately rapid in the surface layer, moderately rapid in the subsubsurface organic soil, and moderate or moderately rapid in the mineral subsurface layer
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 2 to 26 inches

Most areas of this unit are used as woodland. The native vegetation is jack pine and sphagnum moss (fig. 18).

This unit is not suited to growing cultivated crops and hay because of the very

Figure 18. —This Rock outcrop - Ricker complex supports jack pine, blueberries, and lichen. It has severe management limitations for most uses.

shallow and shallow depth to bedrock. Droughtiness is evident in the summer. When the soil is cultivated or otherwise disturbed, rapid decomposition of organic materials will occur.

This unit is not suited to pasture. Forage production will be poor because of droughtiness in the summer. Significant erosion is possible with normal grazing practices. With an abundance of rock outcrops, forage density tends to be minimal.

The potential productivity for growing red spruce on this unit is moderate. Because of the shallow and very shallow depth to bedrock, root growth is commonly restricted, which increases the potential for windthrow. Seedling mortality can be a moderate problem because of droughtiness and restricted root growth.

The main limitation if this unit is used as a site for dwellings is the depth to bedrock. A better suited site should be considered such as a nearby deep soil. Dwellings with basements can be built above bedrock contact, and then landscaped with additional fill.

The main limitation if this unit is used as a site for local roads and streets is the depth to bedrock. Planning road locations and grades so that rock removal is not needed will help to overcome the depth to bedrock limitation. Blasting of rock may be necessary in some places to allow for proper grading and smoothing.

The main limitation if this unit is used as a site for septic tank absorption fields is depth to bedrock. A better suited site should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative systems that augment the filtering capacity of this system should be considered in order to avert pollution of ground water.

The main limitations if this unit is used as a site for shallow excavations are the

depth to bedrock and excess humus or organic deposits. Digging will be hindered by hard rock conditions, and will necessitate blasting in most areas. Excavations should be routed through deeper nearby soils where possible.

The capability subclass is 7s.

Rr—Roundabout silt loam

This very deep, nearly level, and somewhat poorly drained soil is on slightly concave areas of lake plains and in low positions on uplands. Slopes range from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown silt loam

Subsoil:
9 to 18 inches, light olive brown very fine sandy loam with many mottles
18 to 23 inches, grayish brown silt loam with common mottles
23 to 31 inches, gray very fine sandy loam with common mottles

Substratum:
31 to 37 inches, gray silt loam with common mottles
37 to 45 inches, dark gray silty clay loam with few mottles
45 to 72 inches, dark gray silt loam

Included with this soil in mapping are about 5 percent moderately well drained Nicholville soils on slightly higher areas of the unit. About 5 percent of this map unit consist of Mino soils in areas of more sand and less silt. Also included are about 5 percent Hailesboro soils where the subsoil has more clay. Small areas of poorly drained Deinache soils are in sandy deposits near outwash plains and terraces. Small areas of very poorly drained Pinconning soils are in depressions. In southeastern Clinton County, small areas having a longer growing season than Roundabout soils are included in this map unit. Included areas make up 20 percent of this map unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately slow or moderate in the surface and subsoil, and slow or moderately slow in the substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 12 to 18 inches deep at some time from November through May
Root zone: mainly to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Many areas of this soil are used for hay or corn (fig. 19). Other areas are used for pasture or woodland. Only drained areas of this soil qualify as prime farmland.

This soil is moderately suited to growing cultivated crops and hay. Without adequate drainage measures, the seasonal high water table commonly delays planting in the spring and harvest in the fall. Surface and subsurface drainage can significantly improve farm operation efficiency and increase crop productivity. Conservation tillage systems, crop rotation, and maintenance of drainageways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table causes the soil to be wet during part of the growing season. Selecting forage plants which are

Figure 19. —The small hill or drumlin type of landform in the background is composed mainly of well drained Madrid soils. In the cornfield and meadow below is a soil similar to Roundabout silt loam, but having a slightly longer growing season.

tolerant of wet soil conditions will help sustain productivity. Excessive grazing during wet soil conditions increases the potential for surface compaction and subsequent loss of desired plant species. Rotational grazing, proper stocking rates, maintenance of drainageways, and yearly mowing are good management practices.

The potential productivity for growing eastern white pine on this soil is very high. Because of the seasonal high water table, heavy equipment can bog down in the soil causing ruts and soil erosion. Root growth is also restricted by seasonal wetness which allows for severe windthrow occurrence in some areas. By minimizing clearcutting activities and selecting species tolerant of wet soil conditions, seedling survival can be improved and windthrow reduced.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. Well drained nearby soils may be better suited for this use. Foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also help control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Constructing roads on a raised bed of coarser grained material and providing adequate drainage will decrease the potential for damage from frost action and wetness.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the moderately slow permeability in the substratum. A better suited site should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be limited to the drier periods of the year unless a drainage system is installed.

The capability subclass is 3w.

Ry—Runeberg mucky loam

This very deep, nearly level, and very poorly drained soil is in low positions on glacial till plains. Slopes range from 0 to 2 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, black mucky loam

Subsoil:
9 to 17 inches, brown cobbly loam with many mottles
17 to 22 inches, dark grayish brown sandy loam with common mottles

Substratum:
22 to 42 inches, grayish brown fine sandy loam with many mottles
42 to 72 inches, grayish brown gravelly fine sandy loam with few mottles

Included with this soil in mapping are about 5 percent somewhat poorly drained Malone and Peasleeville soils on slightly higher areas of the unit. About 5 percent of this unit consist of very poorly drained Wonsqueak soils in small depressions where organic matter is thick. Small areas of clayey Adjidaumo soils are included near lake plains where the soil is more clayey. Small areas of very poorly drained Cook soils are included where a sandy surface and subsoil is present. In some areas, the substratum is very gravelly or very cobbly. Also included in southeastern Clinton County are small areas having a longer growing season than Runeberg soils. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the mineral surface, moderately slow in the subsoil, and slow or moderately slow in the substratum
Available water capacity (average for 40-inch profile): moderate to high
Depth to seasonal high water table: at the surface to 12 inches deep at some time from November through July
Root zone: mainly to 12 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for woodland or brush.

This soil is poorly suited to growing cultivated crops and hay. Without adequate drainage measures, the seasonal high water table delays planting in the spring and harvest in the fall. Surface and subsurface drainage can significantly improve the efficiency of farm operations and increase productivity. Because of the low position on the landscape and nearly level topography, establishing a drainage outlet for this soil without adversely affecting important wetland can be difficult. Conservation tillage systems, crop rotation, and maintenance of drainageways are good management practices.

This soil is poorly suited to pasture. The seasonal high water table causes the soil to be wet during most of the spring and fall. Selecting forage plants which are tolerant of wet soil conditions will help sustain productivity. Excessive grazing on this soil during the spring causes compaction and loss of forage cover. Rotational grazing,

deferred grazing, proper stocking rates, maintaining drainageways, and yearly mowing are good management practices.

The potential productivity for growing northern white cedar on this soil is moderately high. Because of the seasonal high water table, heavy equipment will commonly cause deep ruts and excess soil erosion. Harvesting may be limited to dry or frozen periods. Limited root growth from wet soil conditions can retard seedling growth, and may cause windthrow in some areas of this soil. Selecting species that are tolerant of wet soil conditions will help increase seedling survival and reduce windthrow. Minimizing thinning practices can also help reduce windthrow.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. Better-drained, nearby soils should be considered for this use.

The main limitations if this soil is used as a site for local roads and streets are frost action and the seasonal high water table. New roads should be routed around this unit if possible. Roads placed on a raised bed of coarse-grained material with adequate drainage will reduce frost action.

The main limitations if this soil is used as site for septic tank absorption fields are the seasonal high water table and the slow percolation rate in the substratum. There is a risk of groundwater pollution or effluent seeping in to the ground surface if this soil is used as a site for septic tank absorption fields. A better suited site on a higher landscape position should be considered for this use. Conventional septic system designs will perform very poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations will be limited to the drier periods of the year unless a drainage system is installed. Sloughing trench walls may also occur because of wetness.

The capability subclass is 5w if the soil is undrained and 4w if drained.

Sb—Sabattis mucky fine sandy loam, very bouldery

This very deep and very poorly drained soil is on low areas and drainageways of upland glacial till. Large stones cover up to 3 percent of the soil surface. Slopes range from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, black muck
8 to 11 inches, very dark grayish brown and very dark brown mucky fine sandy loam

Subsoil:
11 to 19 inches, grayish brown cobbly sandy loam with many mottles
19 to 26 inches, grayish brown gravelly fine sandy loam with many mottles

Substratum:
26 to 39 inches, light brownish gray gravelly fine sandy loam with common mottles
39 to 72 inches, brown fine sandy loam with few mottles

Included with this soil in mapping are about 5 percent Wonsqueak and Beseman soils in broad depressions and drainageways having thicker organic deposits. About 5 percent of this unit includes Runeberg and Tughill soils. Runeberg soils are less acid than Sabattis soils. Tughill soils are more acid and more gravelly than Sabattis soils on similar landscapes. Also included are moderately deep to bedrock soils and soils subject to flooding by streams. Some small areas are extremely stony while other areas lack surface stones. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately slow to moderately rapid in the organic mantle, moderate or moderately rapid in the mineral subsurface and subsoil, and moderately slow in the substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: at the surface to 12 inches below the surface at some time from November through May
Root zone: mainly to 14 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland.

This soil is poorly suited to growing cultivated crops and hay. The seasonal high water table will delay planting in the spring and harvesting in the fall without adequate drainage measures. Surface and subsurface drainage can significantly increase crop productivity and allow more effective farm operations. Good outlets are commonly difficult to establish without adversely affecting important wetland habitat. Conservation tillage systems, crop rotation, maintenance of existing drainageways, and the use of cover crops are good management practices.

This soil is poorly suited to pasture. The seasonal high water table causes wet soil conditions during the spring. Places that are heavily grazed and traveled will become muddy with stunted plant growth. Key pasture species must be tolerant to wet conditions. Rotational grazing, deferred grazing, proper stocking rates, maintenance of drainageways, and yearly mowing are good pasture management practices on this soil.

The potential productivity for growing red maple on this soil is moderate. Because of the seasonal high water table, heavy equipment will bog down under soft ground conditions. Efficient use of heavy equipment may be limited to dry periods or when the ground is frozen. Windthrow of some tree species will also be severe because of limited root growth above the water table. Some seedling mortality can be expected during years of higher precipitation rates.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher nearby area on the landscape. If this soil is used, foundation drains and protective coatings on basement walls will alleviate some wetness. Diversion ditches in conjunction with other drainage practices can also help control water by carrying it away from the dwelling.

The main limitations if this soil is used as a site for local roads and streets are the seasonal high water table and the potential for frost action. Where possible, new roads should be routed around this area. Roads that are built on raised coarse-grained fill material with adequate drainage will experience less frost action and last longer.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the moderately slow permeability in the substratum. A better suited site on a higher position on the landscape should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless a drainage system is installed. Sloughing of soil may also occur because of wetness. Mechanical support of trench walls will provide protection to workers from possible soil collapse.

The capability subclass is 5s.

Se—Saprists and Aquents, ponded

This unit consists of very deep, level, and very poorly drained soils formed in organic and mineral deposits. It occurs in depressions and along the perimeter of water bodies occupying glacial lake plains, outwash plains, and glacial till uplands. Some upland areas of this unit are the result of beaver dams blocking drainageways. Saprists and Aquents commonly occupy stationary water areas. This unit is covered by water during most of the year. Typically, these areas consist of 40 percent Saprists, 40 percent Aquents, and 20 percent other soils. However, some areas of this unit may be mostly Saprists and other areas may be mostly Aquents. Slopes are less than 1 percent.

A typical sequence, depth, and composition of layers in the saprists part of this unit are not provided because of variability. However, saprists generally consist of black to dark gray, well decomposed organic material 16 to 60 inches thick. This material overlies a very dark gray to olive gray substratum with textures ranging from sand to silty clay.

A typical sequence, depth, and composition of the layers in the aquents part of this unit are not provided because of variability. However, aquents generally consist of black to olive gray mineral and organic material that is 2 to 15 inches thick. The underlying layer is a very dark grayish brown to light olive gray substratum with textures ranging from sand to silty clay.

Included with this unit in mapping are small intermixed areas of very poorly drained Bucksport, Wonsqueak, Sabattis, Runeberg, Cook, Adjidaumo, and Medomak soils. Small areas of poorly drained Lyonmounten, Adjidaumo, and Rumney soils are on slightly higher positions of this unit. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties of the Saprists soils—

Permeability: moderately slow to moderately rapid in the organic surface and subsoil, and moderately slow to rapid in the substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 12 inches above the surface to just below the surface from September through July.
Root zone: 6 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Soil Properties of Aquents—

Permeability: moderately slow to moderately rapid in the surface, and very slow to rapid below the surface
Available water capacity (average for 40-inch profile): moderate to high
Depth to seasonal high water table: 24 inches above the surface to 6 inches below the surface from September through July
Root zone: 6 inches deep
Shrink-swell potential: low to moderate
Depth to bedrock: greater than 60 inches

Cattails, sedges, and other water-tolerant plants cover most of the acreage of this unit. Trees are on the edges of some units where the water is shallow.

Ponding, seasonal high water table, soil instability, and the lack of drainage outlets severely limit this unit for most uses. This map unit typically represents important wetland wildlife habitat.

The capability subclass is 8.

ShB—Schroon fine sandy loam, 3 to 8 percent slopes

This very deep, gently sloping, and moderately well drained soil occurs on slightly convex and undulating areas of broad, upland glacial till plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, dark brown fine sandy loam

Subsoil:
8 to 14 inches, strong brown fine sandy loam
14 to 23 inches, brown gravelly fine sandy loam with few mottles

Substratum:
23 to 44 inches, yellowish brown gravelly fine sandy loam with common mottles
44 to 60 inches, pale brown gravelly fine sandy loam with many mottles
60 to 72 inches, brown gravelly fine sandy loam with common mottles

Included with this soil in mapping are about 5 percent well drained Bice and Monadnock soils on slightly higher convex positions. About 5 percent of this unit includes somewhat poorly drained Peasleeville soils on footslopes and along drainageways (fig. 20). Small areas of Skerry soils are included in places that have a dense substratum. Small areas of Schroon soils with a very stony surface are included. Also included are small areas similar to Colosse and Hermon soils with

Figure 20. —A landscape representing the Schroon and Peasleeville soils in Ellenburg. Schroon soils occupy the higher, more convex areas like the mowed hayfields in the background. Somewhat poorly drained Peasleeville soils are commonly on slightly concave and nearly level parts of the landscape as in the area near the drainage pipes.

texture that is very gravelly or cobbly. In some areas, the surface texture is a loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate throughout
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: 18 to 24 inches deep at some time from November through April
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as cropland or hayland. This soil is considered to be prime farmland in Clinton County.

This soil is well suited to growing cultivated crops and hay. Because of the seasonal high water table, wet soil conditions may delay planting or harvesting after periods of heavy precipitation. Installation of drainage, especially within somewhat poorly drained inclusions, will aid in farm operation efficiency. Applying a conservation tillage system, rotationg crops, and establishing a cover crop are good management practices.

This soil is well suited to pasture. The seasonal high water table may cause muddy barnyards and stunted forage growth in some areas of this unit. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major limitations for timber growth and management on this soil.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site such as a slightly higher area in the map unit should be considered. If this soil is used, foundation drains and protective coatings on basement walls will alleviate wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Construction plans should call for providing coarse-grained subgrade material. Adequate drainage in critical areas will also decrease the potential frost action.

The main limitation if this soil is used as a site for septic tank absorption fields is the seasonal high water table. Higher spots within this unit will likely be better sites. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this soil above the water table should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to drier periods of the year unless a drainage system is installed. Sloughing of soil in the excavated area may also occur because of wetness.

The capability subclass is 2w.

ShC—Schroon fine sandy loam, 8 to 15 percent slopes

This very deep, strongly sloping, and moderately well drained soil occurs on footslopes and side slopes of upland glacial till plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, dark brown fine sandy loam

Subsoil:
8 to 14 inches, strong brown fine sandy loam
14 to 23 inches, brown gravelly fine sandy loam with few mottles

Substratum:
23 to 44 inches, yellowish brown gravelly fine sandy loam with common mottles
44 to 60 inches, pale brown gravelly fine sandy loam with many mottles
60 to 72 inches, brown gravelly fine sandy loam with common mottles

Included with this soil in mapping are about 5 percent well drained Bice and Monadnock soils on more convex positions. About 5 percent of this unit are somewhat poorly drained Peasleeville and Adirondack soils on slightly concave landscape positions and along drainageways. Small areas of Skerry and Becket soils are included in places having a dense substratum. Small areas of Schroon soils with a very stony surface are included. Also included are small areas similar to Colosse and Hermon soils having textures that are very gravelly or cobbly. In some areas the surface texture is a loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate throughout
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: 18 to 24 inches deep at some time from November through April
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for crops, hay, and pasture.

This soil is moderately suited to growing cultivated crops and hay. Erosion is commonly a problem on long slopes and areas planted to row crops. Crop productivity can be significantly reduced by the loss of valuable topsoil. Cultivating should be along the contour of the land where possible. Applying a conservation tillage systems, rotating crops, stripcropping, and growing cover crops are good management practices.

This soil is moderately suited to pasture. Erosion can be a significant management problem on heavily grazed areas of this unit. Soil erosion can be diminished and key plant species encouraged if overgrazing is avoided. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major limitations for timber growth and management on this soil.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site on a Bice or Monadnock soil inclusion should be considered. If this soil is used, foundation drains and protective coatings on basement walls will alleviate wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Construction plans should call for providing coarse-grained subgrade material. Adequate drainage in critical areas will also decrease potential frost action.

The main limitation if this soil is used as a site for septic tank absorption fields is the seasonal high water table. Higher spots on more convex positions within this unit will likely be better sites. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as as site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless a drainage system is installed. Sloughing of soil in the excavated area may also occur because of wetness.

The capability subclass is 3e.

SkB—Schroon fine sandy loam, gently sloping, very stony

This very deep and moderately well drained soil occurs on footslopes and undulating positions of broad, upland glacial till plains. Large stones cover up to 3 percent of the ground surface. Slope ranges from 3 to 15 percent, but is dominantly 3 to 8 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, dark brown fine sandy loam

Subsoil:
8 to 14 inches, strong brown fine sandy loam
14 to 23 inches, brown gravelly fine sandy loam with few mottles

Substratum:
23 to 44 inches, yellowish brown gravelly fine sandy loam with common mottles
44 to 60 inches, pale brown gravelly fine sandy loam with many mottles
60 to 72 inches, brown gravelly fine sandy loam with common mottles

Included with this soil in mapping are about 5 percent well drained Bice soils on slightly more convex positions. About 5 percent of this unit includes somewhat poorly drained Peasleeville soils on footslopes, on nearly level areas, and along drainageways. Small areas of excessively drained Colosse and Hermon soils are included where the soil is very cobbly or gravelly. Also included are soils similar to Skerry and Adirondack soils, which have a dense substratum. Some small areas are not stony, and some small inclusions are strongly sloping. In some areas, the surface texture was a loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate throughout
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: 18 to 24 inches deep at some time from November through April
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland. Some areas are used for pasture.

This soil is poorly suited to growing cultivated crops and hay. Large surface stones will usually inhibit cultivation. Unless removed from the field, these stones will cause excessive wear on equipment. Erosion is commonly a problem on long cultivated slopes and areas planted to row crops. Stone clearing, conservation tillage systems, crop rotation, and the use of cover crops are good management practices.

This soil is poorly suited to pasture. Large stones covering the surface inhibit yearly mowing and other maintenance practices. Erosion can be a significant management problem on heavily grazed areas of this soil. Avoidance of overgrazing

will diminish soil erosion and encourage key plant species. Stone clearing, rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major management limitations on this soil for growing timber.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A slightly higher or more convex site on the landscape should be considered. If this soil is used, foundation drains and protective coatings on basement walls will alleviate wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Construction plans should call for providing coarse-grained subgrade material. Adequate drainage in critical areas will also decrease the potential frost action.

The main limitation if this soil is used as a site for septic tank absorption fields is the seasonal high water table. A better suited site on a higher part of the landscape should be considered. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this soil above the water table should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness.

The capability subclass is 6s.

Sn—Sciota fine sand

This very deep, nearly level, and somewhat poorly drained soil is on smooth plains and on toeslopes of narrow ridges. Slopes range from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown fine sand

Subsoil:
9 to 19 inches, pale brown and light olive brown fine sand with common mottles
19 to 24 inches, pale brown and light yellowish brown fine sand with many mottles
24 to 37 inches, light brownish gray and pale brown fine sand with common mottles

Substratum:
37 to 50 inches, dark grayish brown loamy fine sand with common mottles
50 to 57 inches, dark gray fine sand with few organic stains
57 to 72 inches, dark gray sand

Included with this soil in mapping are about 5 percent moderately well drained Mooers and Croghan soils on slightly convex areas of the unit. About 5 percent of this unit consist of poorly drained Deinache soils along drainageways and in depressions. About 5 percent of this unit are Wainola soils having a more reddish brown subsoil. Also included are small areas of Swanton and Pinconning soils having a clay substratum within 40 inches deep. Small areas of Occur and Coveytown soils are included where loamy till substrata are within 40 inches of the surface. In some areas, the surface texture is fine sandy loam or loamy fine sand. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid throughout
Available water capacity (average for 40-inch profile): low to moderate

Depth to seasonal high water table: 12 to 18 inches deep at some time from November through May
Root zone: mainly to 18 inches deep (from the surface)
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for cropland or hayland. Some undrained areas are used for brush or pasture. Only drained areas of this soil qualify as prime farmland.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and harvest in the fall. Surface and subsurface drainage will help to improve farm operation efficiency and increase crop yield. Conservation tillage systems, crop rotation and maintenance of waterways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table can cause significant wetness problems in barnyards and heavily traveled areas of the pasture especially in the spring. Forage growth may be stunted during the early growing season as a result of wetness. Rotational grazing, deferred grazing, proper stocking rates, surface drainage, and yearly mowing are good management practices.

The potential productivity for growing red maple on this soil is moderate. Because of the seasonal high water table, heavy equipment may bog down under soft ground conditions. Seedling mortality and windthrow are also possible management problems because of restricted root growth.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered on a higher area within the map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

A moderate limitation if this soil is used as a site for local roads and streets is the seasonal high water table. Roads constructed on coarse-grained fill material with adequate drainage will generally be more durable.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the soil's sandy texture being a potentially poor filter. A better suited site should be considered for this use. If this soil is used, higher spots within the map unit will likely perform better. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this soil above the water table should be considered. Because of the soil's rapid permeability, there is a possibility of ground water contamination.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and the tendency of the soil to cave in. Digging operations may be restricted to the drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 3w.

So—Shaker loam

This very deep, nearly level, and somewhat poorly drained soil occurs on smooth or slightly undulating areas of glacial lake plains. Slopes range from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—
Surface layer:
0 to 9 inches, dark brown loam

Subsoil:
9 to 15 inches, brown very fine sandy loam with common mottles
15 to 25 inches, light brownish gray, very fine sandy loam with common mottles

Substratum:
25 to 72 inches, dark gray clay with common mottles

Included with this soil in mapping are about 5 percent Rhinebeck soils in areas where the loamy mantle is too thin or absent. About 5 percent of this unit includes moderately well drained soils similar to Flackville soils on higher more convex positions. Small areas of Northway and Massena soils are included where the substratum is a loamy till material. Small areas of Pipestone and soils similar to Mino soils are intermixed in the unit. Also, small areas of soils similar to Pinconning, Runeberg, and Gougeville soils are included in depressions and along drainageways. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid in the surface and subsoil, and slow or very slow in the substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: perched 12 to 18 inches deep at some time from November through May
Root zone: mainly to 20 inches deep
Shrink-swell potential: low in the surface and subsoil, and moderate in the substratum
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for hay or crops. Some areas are used as woodland. Only drained areas of this soil qualify as prime farmland.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and harvest in the fall. Surface and subsurface drainage will help to improve farm operation efficiency and increase crop yields. Conservation tillage systems, crop rotation, and maintenance of drainageways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table can cause significant wetness problems in barnyards and heavily traveled areas of the pasture. Forage growth may be stunted during the early growing season as a result of wetness. Rotational grazing, deferred grazing, proper stocking rates, surface drainage, and yearly mowing are good management practices.

The potential productivity for growing red maple on this soil is moderate. The seasonal high water table and restricted rooting depth are major management concerns. Wet soil conditions can increase seedling mortality and cause heavy equipment to bog down. Rooting depth is restricted by the seasonal high water table and the clayey substratum. Therefore, some trees may be uprooted during windy periods. Seedlings survive best if competing vegetation is controlled. Minimal tree cutting helps to reduce the potential for windthrow.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better suited site should be considered such as a higher area in the map unit. If this soil is used, foundation drains and protective coatings on basement walls will help alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Providing a suitable subgrade material and adequate drainage in critical areas will also decrease potential frost action.

The main limitations if this soil is used as a site for septic tank absorption fields are the slow permeability rate in the clayey substratum and the seasonal high water table. A better-suited site should be considered for this use. Higher spots within the

map unit will likely perform better for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness.

The capability subclass is 3w.

SpB—Sheddenbrook gravelly loamy fine sand, 3 to 8 percent slopes

This moderately deep, gently sloping, and moderately well drained soil occurs on linear, slightly convex positions and undulating deposits of outwash plains overlying sandstone bedrock. Slopes are dominantly 3 to 8 percent, but range from 0 to 8 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed roots and leaves
1 to 7 inches, very dark brown gravelly loamy fine sand

Subsoil:
7 to 17 inches, reddish brown gravelly loamy sand
17 to 27 inches, brown gravelly loamy sand

Substratum:
27 to 30 inches, brown gravelly loamy sand with common mottles
30 inches, light gray sandstone bedrock

Included with this soil in mapping are about 5 percent Colosse and Trout River soils on deeper slightly higher positions in the landscape. About 5 percent of this unit are Fahey and Occur soils on similar very deep landscape positions. About 5 percent of this unit are shallow to bedrock soils similar to Irona, Topknot and Chazy soils but having more sand throughout the soil profile. Small areas of Adams and Croghan soils occur on knolls and areas transitional to outwash plains. Also included are small areas of Ricker soils where bedrock is very shallow. Inclusions make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: 18 to 24 inches deep at some time from December through May
Root zone: mainly to 24 inches deep or bedrock contact
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Most areas of this soil are being used for woodland or pasture.

This soil is moderately suited to growing cultivated crops and hay. Droughtiness can limit crop productivity. Adding organic matter will increase this soil's ability to retain moisture during dry periods. Conservation tillage systems, crop rotation, manuring according to crop needs, and the use of cover crops are good management practices.

This soil is moderately suited to pasture. Droughty soil conditions can reduce optimum forage growth. Key pasture plants should be tolerant to dry conditions for short periods. Uncontrolled grazing during droughty periods will suppress desirable forage and enhance weed competition. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity of this soil for growing eastern white pine is high. Soft ground conditions during the early spring may moderately limit use of heavy equipment in some areas of this soil. The low available water capacity can adversely affect seedling survival and enhance weed competition during dry periods. Planting trees during moist periods will help to diminish seedling mortality. There is a moderate windthrow potential as a result of limited root growth above bedrock and the seasonal high water table.

The main limitations if this soil is used as a site for dwellings with basements are the seasonal high water table and depth to bedrock. A slightly higher and deeper inclusion should be considered for this use. Foundation drains and protective coatings on basement walls will alleviate wetness. Diversion ditches can also control surface water by carrying it away from the dwelling. Dwellings with basements can be built above bedrock and landscaped with additional fill.

Moderate limitations if this soil is used as a site for local roads and streets are the seasonal high water table and depth to bedrock. Some drainage along the road shoulders will increase road durability. New road construction may require a moderate amount of bedrock blasting or mechanical ripping.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table, depth to bedrock, and the potentially poor filtering capacity of the sandy soil. A better suited site such as a deeper inclusion should be considered. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered. Because of rapid permeability, there is a potential risk of ground water contamination.

The main limitations if this soil is used as a site for shallow excavations are depth to bedrock, seasonal high water table, and tendency for the soil to cave in. Excavation would probably be less costly in nearby deeper areas. Some wetness problems may occur on construction sites and sloughing may occur during early spring. In areas of deeper inclusions, trench walls should be mechanically supported so as to prevent soil from caving in on workers or other possible victims.

The capability subclass is 3s.

SrB—Skerry fine sandy loam, 3 to 8 percent slopes

This very deep, gently sloping, and moderately well drained soil is on slightly convex or undulating slopes and footslopes on upland till plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 3 inches, black fine sandy loam

Subsurface layer:
3 to 5 inches, reddish gray fine sandy loam

Subsoil:
5 to 16 inches, dark reddish brown fine sandy loam
16 to 21 inches, dark brown fine sandy loam
21 to 24 inches, brown gravelly sandy loam with common mottles

Substratum:
24 to 72 inches, very firm, brown gravelly sandy loam

Included with this soil in mapping are about 5 percent well drained Becket soils on strongly sloping sites and other higher positions. About 3 percent of this unit consist of Sunapee soils where the substratum is less dense. Also included are about 4 percent somewhat poorly drained Adirondack soils and very poorly drained Sabattis soils along drainageways and in concave areas. Very stony areas of Skerry soils are in woodland and other uncleared locations. Small very gravelly areas are included along valley sides. In some areas, the surface texture is sandy loam or loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum.
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: perched 18 to 30 inches deep at some time from November through May
Root zone: usually restricted to 20 inches deep or to the depth of the very firm substratum
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Many areas of this soil are used as hay or pasture. Some areas are reverting to brush or woodland. This soil is considered to be prime farmland in Clinton County.

This soil is well suited to growing cultivated crops and hay. Erosion can be a problem on long slopes and areas planted to row crops. If erosion is left unchecked, crop production may be lowered through loss of valuable topsoil. Cultivating along the contour of the landscape will decrease soil erosion. The seasonal high water table and dense substratum may limit the growth of deep rooted crops like alfalfa. Conservation tillage systems, crop rotation, stripcropping, and the use of cover crops are good management practices.

This soil is well suited to pasture. Erosion can be a management problem on long slopes that are heavily grazed. Overgrazing should be controlled so as to encourage key plant species. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. The seasonal high water table and dense substratum can moderately limit root growth, increasing the windthrow potential. Selecting shallow-rooted species and avoiding the practice of clearcutting are ways to minimize windthrow.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better-drained soil will be more suited to dwellings with basements. Foundation drains and protective coatings on basement walls will alleviate wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Providing coarse-grained subgrade material is one way to reduce frost action. Adequate drainage in critical areas will also decrease the potential for frost action.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and slow percolation rate. Better-drained nearby soils may be better suited for this use. Installing a curtain drain around the filter field and diverting water from higher areas will help alleviate wetness. An alternate design that augments the absorptive capacity of the system is needed on this soil to avoid seepage problems and prolong use of the septic field.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations during wet periods may be delayed unless drainage is installed.

The capability subclass is 2e.

SsB—Skerry fine sandy loam, gently sloping, very bouldery

This very deep and moderately well drained soil is on slightly convex or undulating slopes on till plains and hills in glaciated uplands. Boulders cover up to 3 percent of the surface of this unit. Slopes range from 0 to 8 percent, but are dominantly 3 to 8 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 3 inches, black fine sandy loam

Subsurface layer:
3 to 5 inches, reddish gray fine sandy loam

Subsoil:
5 to 16 inches, dark reddish brown fine sandy loam
16 to 21 inches, dark brown fine sandy loam
21 to 24 inches, brown gravelly sandy loam with common mottles

Substratum:
24 to 72 inches, very firm, brown gravelly sandy loam

Included with this soil in mapping are about 5 percent well drained Becket soils on strongly sloping sites and other high positions. About 3 percent of this unit consist of Sunapee soils where the substratum is less dense. Also included are about 4 percent somewhat poorly drained Adirondack soils and very poorly drained Sabattis soils along drainageways and in concave areas. Small inclusions of Skerry soils with few or no stones on the surface are in locations which have been cleared. Small areas of Hermon, Colton, and Occur soils exist in pockets along valley sides. In some areas, the surface texture is sandy loam or loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: perched 18 to 30 inches deep at some time from November through May
Root zone: usually restricted to 20 inches deep or to the depth of the very firm substratum
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland or brush. A few areas are used for pasture.

This soil is poorly suited to growing cultivated crops and hay. Large surface stones will inhibit efficient use of farm machinery and can cause serious wear on equipment. Stone clearing, conservation tillage systems, crop rotation, and the use of cover crops are good management practices.

This soil is poorly suited to pasture. Large surface stones can inhibit yearly mowing and other maintenance practices. Overgrazing may lead to excessive competition from weeds and loss of desired forage. Proper grazing techniques will help sustain key plant species. Stone removal, rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. The presence of both a seasonal high water table and the dense substratum can moderately restrict root growth, increasing the potential for windthrow.

Selecting shallow-rooted species and avoiding the practice of clearcutting are ways to minimize windthrow.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. Foundation drains and protective coatings on basement walls will alleviate wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Providing coarser grained subgrade material is one way to reduce frost action. Adequate drainage in critical areas will also decrease potential frost action.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the slow percolation rate in the substratum. Better-drained inclusions or nearby soils may be more suitable for this use. Installing a curtain drain around the filter field and diverting water from higher areas will help alleviate wetness. An alternate design that augments the absorptive capacity of this soil above the seasonal water table is needed to avoid seepage problems and prolong use of this septic field.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations during wet periods may be delayed unless drainage is installed.

The capability subclass is 6s.

SsC—Skerry fine sandy loam, strongly sloping, very bouldery

This very deep and moderately well drained soil is on unevenly sloping hillsides and footslopes on upland till plains. Boulders cover up to 3 percent of the surface of this unit. Slopes range from 8 to 15 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 3 inches, black fine sandy loam

Subsurface layer:
3 to 5 inches, reddish gray fine sandy loam

Subsoil: 5 to 16 inches, dark reddish brown fine sandy loam
16 to 21 inches, dark brown fine sandy loam
21 to 24 inches, brown gravelly sandy loam with common mottles

Substratum:
24 to 72 inches, very firm, brown gravelly sandy loam

Included with this soil in mapping are about 10 percent well drained Becket soils on upper slopes and other more convex positions. About 5 percent of this unit consist of Sunapee soils where the substratum is less dense. Also included are small areas of somewhat poorly drained Adirondack soils along drainageways and toe slopes. Small areas of Becket soils are on moderately steep inclusions. Small inclusions of Skerry soils with few or no stones on the surface are in locations which have been cleared. In some areas, the surface texture is sandy loam or loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the mineral surface and subsoil, and moderately slow or slow in the substratum
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: perched 18 to 30 inches deep at some time from November through May
Root zone: usually restricted to 20 inches deep or to the depth of the very firm substratum
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland or brush.

This soil is poorly suited to growing cultivated crops and hay. Large surface stones inhibit efficient use of farm machinery and can cause serious wear on equipment. Stone clearing will be necessary to accommodate farm machinery use and to avoid excess wear. Erosion can become a serious management problem in cultivated areas not protected by vegetative cover. Stone clearing, conservation tillage systems, crop rotation, and use of cover crops are good management practices.

This soil is poorly suited to pasture. Large stones covering the surface inhibit yearly mowing and other maintenance practices. Overgrazing may lead to excessive competition from weeds and increased erosion. Proper grazing techniques will help sustain key plant species and conserve topsoil. Stone removal, rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. The presence of both a seasonal high water table and the dense substratum can moderately restrict root growth which increases windthrow potential. Selection of shallow rooting species and avoiding the practice of clearcutting are ways to minimize windthrow.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. Foundation drains and protective coatings on basement walls will alleviate wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Providing coarse-grained subgrade material is one way to reduce frost action. Adequate drainage in critical areas will also decrease the potential for frost action.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and slow permeability rate in the substratum. Better-drained inclusions or nearby soils may be more suitable for this use. Installing a curtain drain around the filter field and diverting water from higher areas will help alleviate wetness. An alternate design that augments the absorptive capacity of the system is needed on this soil to avoid seepage problems and prolong use of the septic field.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations during wet periods may be delayed unless drainage is installed.

The capability subclass is 6s.

StD—Success cobbly sandy loam, moderately steep, very bouldery

This very deep and somewhat excessively drained soil is on hillsides of glaciated upland valleys. Boulders cover up to 3 percent of the surface. Slopes are dominantly 15 to 25 percent, but range from 10 to 35 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, very dark grayish brown cobbly sandy loam

Subsurface layer:
2 to 8 inches, pinkish gray cobbly sandy loam

Subsoil:
8 to 10 inches, dark reddish brown gravelly sandy loam
10 to 13 inches, dark reddish brown very gravelly sandy loam
13 to 18 inches, reddish brown very gravelly loamy sand
18 to 25 inches, yellowish brown very cobbly loamy sand
25 to 37 inches, brown and yellowish brown very gravelly loamy sand

Substratum:
37 to 72 inches, brown gravelly loamy sand

Included with this soil in mapping are about 5 percent Hermon soils lacking cementation or having only a minor amount of cementation in the subsoil. About 5 percent of this unit are Fernlake soils having less rock fragments in the profile. Small areas of Colton soils are included where the gravel and sand deposits are more stratified in the substratum. In slightly concave spots and less sloping areas of this unit, there are small inclusions of soils similar to the moderately well drained Sunapee soils. Also included are areas of well drained Monadnock and Becket soils where the rock fragments are less than Success soils. Both of these soils occupy similar positions on the landscape but Becket soils have a dense substratum. Small inclusions of gently sloping and strongly sloping areas also occur. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid in the mineral surface and subsoil, and rapid in the substratum
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: mainly to 20 inches deep or restricted by cementation in the subsoil
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland.

This soil is poorly suited to growing cultivated crops and hay. Moderately steep slopes and surface boulders seriously restrict cultivation and other equipment use. Also, its cemented subsoil can impede the depth of root growth for many crops. Soil erosion and the subsequent loss of crop productivity are potential management concerns, especially in areas where vegetation has been removed.

This soil is poorly suited to pasture. Moderately steep slopes and surface boulders make pasture management more difficult and costly. The cemented subsoil can impede the depth of root growth for many forage crops. Erosion is also a serious concern on heavily traveled areas of this unit. Stone removal, rotational grazing, proper stocking rates, and yearly mowing are good management practices.

The potential productivity for growing eastern white pine on this soil is high. Seedling mortality may be severe because of droughty soil and bouldery conditions. Planting seedlings during moist soil conditions and controlling weed competition will help survival rates. The presence of surface boulders may somewhat inhibit the maneuverability and safe use of equipment. Avoiding clearcut practices and placing logging trails along the contour of the landscape will reduce the potential for soil erosion.

The main limitations if this soil is used as a site for dwellings are slope and the cemented subsoil. Building sites will require more grading and landscaping expenses than the lesser sloping areas.

The main limitations if this unit is used as a site for local roads and streets are the moderately steep slopes and cemented subsoil. Routing new roads around this unit may be a cost-effective alternative. Building roads along the contour will help overcome some of the slope limitation. Costs of grading and landscaping on areas of this soil will be high in comparison to the less sloping inclusions or nearby map units. Cemented subsoil material on roadbanks may be difficult to grade and seed without additional topsoil.

The main limitations if this soil is used as a site for septic tank absorption fields are the moderately steep and steep slopes, the soil's poor ability to filter effluent properly, and the cemented layer in the subsoil. A better suited site, such as a less sloping inclusion, should be considered.

The main limitations if this soil is used as a site for shallow excavations are the moderately steep slope, the tendency to cave in, and the cemented subsoil. Maneuvering equipment on these slopes will be difficult or hazardous at times. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims. The speed of excavation may be slowed considerably by the cemented subsoil layers.

The capability subclass is 6s.

SwB—Sunapee fine sandy loam, 3 to 8 percent slopes

This very deep, gently sloping, and moderately well drained soil is on slightly convex or undulating slopes on upland till plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 3 inches, dark brown fine sandy loam

Subsurface layer:
3 to 7 inches, brown fine sandy loam

Subsoil:
7 to 10 inches, dark reddish brown fine sandy loam
10 to 19 inches, reddish brown and yellowish red fine sandy loam
19 to 25 inches, brown fine sandy loam with common mottles
25 to 39 inches, brown and dark yellowish brown fine sandy loam with common mottles

Substratum:
39 to 72 inches, brown gravelly fine sandy loam with common mottles

Included with this soil in mapping are about 5 percent well drained Monadnock soils on upper slopes and other higher positions. About 5 percent of this unit consist of Skerry soils where the substratum is dense. Also included are about 5 percent somewhat poorly drained Adirondack soils and very poorly drained Sabattis soils along drainageways and in concave areas. Small areas of strongly sloping land are included. Small inclusions of very stony Sunapee soils are in woodland and other uncleared locations. In some areas, the surface texture is sandy loam or loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the mineral surface and subsoil, and moderate or moderately rapid in the substratum

Available water capacity (average for 40-inch profile): moderate to high
Depth to seasonal high water table: 18 to 36 inches deep at some time from November through May
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for hay or pasture. Some areas are reverting to brush or woodland. This soil qualifies as prime farmland in Clinton County.

This soil is well suited to growing cultivated crops and hay. The seasonal high water table may delay planting and harvesting operations after periods of heavy precipitation. Drainage systems will aid the efficiency of farm operations. Crop production can be significantly enhanced by lime amendments. Conservation tillage systems, crop rotation, stripcropping, and the use of cover crops are good management practices.

This soil is well suited to pasture. The seasonal high water table can cause wet soil conditions for short periods. Grazing during wet periods can cause surface compaction and lead to the loss of desirable forage. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major limitations for woodland management on this soil.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. Foundation drains and protective coatings on basement walls will alleviate wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

Moderate limitations if this soil is used as a site for local roads and streets include the seasonal high water table and frost action. Providing a coarse-grained subgrade material will help reduce the potential for frost action. Constructing on raised fill material and providing adequate drainage in critical areas will minimize wetness as well as frost action.

The main limitation if this soil is used as a site for septic tank absorption fields is the seasonal high water table. Better-drained inclusions or nearby soils such as Monadnock may be better suited for this use. Installing a curtain drain around the filter field and diverting water from higher areas will help alleviate wetness. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of the soil above the seasonal high water table should be considered.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and tendency for the soil to cave in. Digging operations during wet periods may be delayed unless a drainage system is installed. Mechanically supporting trench walls will reduce the possibility of soil caving in on workers or other victims.

The capability subclass is 2w.

SxB—Sunapee fine sandy loam, gently sloping, very bouldery

This very deep and moderately well drained soil is on slightly convex or undulating slopes on upland till plains. Boulders cover up to 3 percent of the ground surface. Slopes range from 0 to 8 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 3 inches, dark brown fine sandy loam

Subsurface layer:
3 to 7 inches, brown fine sandy loam

Subsoil:
7 to 10 inches, dark reddish brown fine sandy loam
10 to 19 inches, reddish brown and yellowish red fine sandy loam
19 to 25 inches, brown fine sandy loam with common mottles
25 to 39 inches, brown and dark yellowish brown fine sandy loam with common mottles

Substratum:
39 to 72 inches, brown gravelly fine sandy loam with common mottles

Included with this soil in mapping are about 5 percent well drained Monadnock soils on upper slopes and other high positions. About 5 percent of this unit consist of Skerry soils where the substratum is dense. Also included are about 5 percent somewhat poorly drained Adirondack soils and very poorly drained Sabattis soils along drainageways and in concave areas. Small areas of strongly sloping soils are included. Sunapee soils with few or no surface boulders are in some small areas. Also, in some areas, the surface texture is sandy loam or loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the mineral surface and subsoil, and moderate or moderately rapid in the substratum
Available water capacity (average for 40-inch profile): moderate to high
Depth to seasonal high water table: 18 to 36 inches deep at some time from November through May
Root zone: mainly to 24 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland or brush.

This soil is poorly suited to growing cultivated crops and hay. Large surface stones inhibit efficient use of farm machinery and can cause serious wear on equipment. Stone clearing, conservation tillage systems, crop rotation, and the use of cover crops are good management practices.

This soil is poorly suited to pasture. Large stones covering the surface inhibit yearly mowing and other maintenance practices. Overgrazing may lead to compaction and loss of important forage. Stone removal, rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices.

The potential productivity for growing sugar maple on this soil is moderate. There are no major limitations for woodland management on this soil.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. Foundation drains and protective coatings on basement walls will alleviate wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

Moderate limitations for local roads and streets include the seasonal high water table and frost action potential. Providing coarse-grained subgrade material is one way to reduce frost action. Adequate drainage in critical areas will also decrease potential frost action.

The main limitation if this soil is used as a site for septic tank absorption fields is the seasonal high water table. Better-drained inclusions or nearby soils such as Monadnock may be more suitable for this use. Installing a curtain drain around the filter field and diverting water from higher areas will help alleviate wetness. Conventional septic system designs may perform poorly on this soil. Alternative

systems that augment the filtering capacity of the soil above the seasonal high water table should be considered.

The main limitations if this soil is used as a site for shallow excavations are the seasonal high water table and tendency of the soil to cave in. Digging operations during wet periods may be delayed unless drainage is installed. Mechanically supporting trench walls will reduce the possibility of soil caving in on workers or other victims.

The capability subclass is 6s.

Sz—Swanton very fine sandy loam

This very deep, nearly level, and somewhat poorly drained soil is on broad lake plains in the lowlands and on slight upland depressions. Slopes range from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown very fine sandy loam

Subsoil:
9 to 17 inches, brown fine sandy loam with many mottles
17 to 24 inches, brown fine sandy loam with common mottles
24 to 31 inches, grayish brown fine sandy loam with many mottles

Substratum:
31 to 50 inches, grayish brown silty clay with many mottles
50 to 72 inches, dark gray clay with few mottles

Included with this soil in mapping are about 5 percent Hailesboro and Muskellunge soils occupying similar positions in the landscape but lacking a loamy mantle. About 5 percent of this map unit includes moderately well drained Flackville soils on slightly convex areas. Also included are about 5 percent very poorly drained Pinconning soils near drainageways and ponded areas. Small areas of Roundabout and Mino soils are included where loamy deposits are greater than 40 inches deep. Included in this unit are similar soils having sand and loamy sand surface or subsoil layers. Some areas of this soil have a loam or fine sandy loam surface. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately rapid in the surface and subsoil, and slow or very slow in the substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: perched 12 to 18 inches deep at some time from November through May
Root zone: mainly to 20 inches deep
Shrink-swell potential: low in the surface and subsoil, and moderate in the substratum
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as cropland. Some areas are used for woodland and pasture. Only drained areas of this soil qualify as prime farmland in Clinton County.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and harvest in the fall. Surface and subsurface drainage can significantly increase crop production and improve farm operation efficiency. Because of the nearly level topography, this soil may be difficult

to drain without adversely affecting important wetland nearby. Conservation tillage systems, crop rotation, and maintenance of waterways are good management practices.

This soil is moderately suited to pasture. In heavily traveled areas of the pasture, the seasonal high water table can lead to muddy conditions, soil compaction, and loss of forage plants. Forage growth may be stunted during the early growing season as a result of wetness. Rotational grazing, deferred grazing, proper stocking rates, maintenance of existing drainageways, and yearly mowing are good management practices.

The potential productivity for growing eastern white pine on this soil is very high. The seasonal high water table and restricted rooting depth are the major limitations. Wet soil conditions can increase seedling mortality and restrict the use of heavy equipment. Rooting depth is restricted by the seasonal high water table and the clayey substratum. Therefore, some trees may be uprooted during windy periods. Minimal thinning of standing timber helps to reduce potential windthrow. Seedlings tend to survive best if competing vegetation is controlled.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. A better-suited soil on a higher part of the landscape should be considered for this use. If this soil is used, foundation drains and protective coatings on basement walls will alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

The main limitation if this soil is used as a site for local roads and streets is frost action. Constructing roads on raised beds of coarse-grained subgrade material will help reduce potential damage from frost action. Adequate drainage in critical areas will also decrease frost action as well as wetness.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the slow permeability in the clayey substratum. A better-suited soil on a higher position of the landscape should be considered for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table. Digging operations may be restricted to drier periods of the year unless drainage is installed. Sloughing of trench walls may also occur because of wetness.

The capability subclass is 3w.

TcB—Topknot-Chazy complex, gently sloping, rocky

This unit consists of somewhat poorly drained, shallow and moderately deep soils on depressions within bedrock-controlled areas. Topknot soils are generally near rock outcrops on low areas of the landscape. Chazy soils are generally on footslopes and areas between bedrock outcrops. Exposed bedrock covers 0.1 to 2 percent of the surface of this unit. This unit consists of about 40 percent Topknot soils, 35 percent Chazy soils, and 25 percent other soils. The Topknot and Chazy soils are so intermingled on the landscape that it was not practical to map them separately. Slopes range from 0 to 8 percent.

The typical sequence, depth, and composition of the layers in the Topknot soil are as follows—

Surface layer:
0 to 7 inches, very dark brown cobbly loam

Subsoil:
7 to 14 inches, brown gravelly loam with many mottles
14 inches, light gray sandstone bedrock

The typical sequence, depth, and composition of the layers in the Chazy soil are as follows—

Surface layer:
0 to 10 inches, very dark grayish brown loam

Subsoil:
10 to 16 inches, brown fine sandy loam with common mottles
16 to 28 inches, grayish brown fine sandy loam with common mottles
28 inches, light gray sandstone bedrock

Included with this unit in mapping are about 5 percent poorly drained Lyonmounten and very poorly drained Sabattis soils in deeper areas of depressions. About 5 percent are small areas of Peasleeville and Adirondack soils on very deep areas between bedrock ridges. Included are small areas of well drained Irona and Conic soils on higher more convex positions of this map unit. Very poorly drained Wonsqueak muck occurs as small inclusions in drainageways. Also, very stony or extremely stony areas are included. In some areas the surface texture is cobbly or gravelly fine sandy loam. Included areas make up about 25 percent of this unit and range up to 5 acres each.

Soil Properties of the Topknot soils—

Permeability: moderate throughout the mineral soil
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: 12 to 18 inches deep at some time from November through May
Root zone: from surface to bedrock contact
Shrink-swell potential: low
Depth to bedrock: 10 to 20 inches

Soil Properties of the Chazy soils—

Permeability: moderate throughout the mineral soil
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: 12 to 18 inches deep at some time from November through May
Root zone: mainly to 18 inches deep
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Most areas of this soil are in woodland and pasture.

This unit is poorly suited to growing cultivated crops and hay. Shallow depth to bedrock and outcrops of bedrock cause excessive wear on machinery. The seasonal high water table may cause delays in planting and harvest. Because of the depth to bedrock, the potential for pesticide and nutrient loss from runoff on this unit is high. Maintaining drainage systems, conservation tillage, crop residue management and stone clearing are good practices on this unit.

This unit is poorly suited to pasture. Erosion is a serious management concern on heavily traveled areas of this unit. Wet soil conditions as a result of the seasonal high water table allow for muddy conditions, compaction, and accelerated erosion. Overgrazing should be discontinued to avoid significant sheet and gully erosion in critical areas. Rotational grazing, deferred grazing, proper stocking rates, and yearly mowing are good management practices.

The potential productivity for growing red maple on this unit is moderate. Because of the seasonal high water table and depth to bedrock, root growth is restricted allowing for potentially severe windthrow on this unit. Heavy equipment may bog down during wet periods and accelerate soil erosion. For some trees, seedling

mortality tends to be a moderate management concern because of very low available water capacity and shallow rooting depth in areas of Topknot soils.

The main limitations if this unit is used as a site for dwellings are the depth to bedrock and the seasonal high water table. A better suited site should be considered such as a deeper, well drained area. Dwellings with basements can be built above bedrock and landscaped with additional fill. Foundation drains around structures will alleviate some wetness.

The main limitations if this unit is used as a site for local roads and streets are depth to bedrock and high frost action potential. Planning road locations and grades so that rock removal is not needed will help to overcome the depth to bedrock limitation. Blasting of bedrock will be necessary where encountered to achieve proper grading. Coarse-grained subgrade and effective drainage systems will reduce frost action potential.

The main limitations if this unit is used as a site for septic tank absorption fields are depth to bedrock and the seasonal high water table. A better-suited site should be considered for this use. Deeper nearby soils may perform better for this use. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered.

The main limitations if this unit is used as a site for shallow excavations are depth to bedrock and seasonal high water table. Digging in this area of sandstone bedrock will be difficult without blasting. Excavations should be routed through deeper nearby soils where possible. Soil drainage may have to be planned for easier installation of underground utilities.

The capability subclass is 6s.

TnC—Tunbridge-Lyman complex, strongly sloping, very rocky

This unit consists of somewhat excessively to well drained, moderately deep and shallow soils. The Tunbridge soils formed in moderately deep deposits of loamy glacial till on side slopes and near ridgetops. The Lyman soil were formed from shallow deposits of loamy glacial till on ridgetops and other areas near bedrock. Exposures of bedrock cover 2 to 10 percent of the surface of this mapping unit. This unit consists of about 50 percent Tunbridge soils, 30 percent Lyman soils and about 20 percent other soils. The Tunbridge and Lyman soils are so intermingled that it was not practical to map them separately. Slopes range from 3 to 15 percent but are dominantly 8 to 15 percent.

The typical sequence, depth, and composition of the layers of the Tunbridge soil are as follows—

Surface layer:
0 to 1 inch, very dark brown fine sandy loam

Subsurface layer:
1 to 4 inches, reddish brown fine sandy loam

Subsoil:
4 to 9 inches, reddish brown gravelly loam
9 to 16 inches, yellowish red loam
16 to 26 inches, brown gravelly fine sandy loam
26 inches, crystalline bedrock

The typical sequence, depth, and composition of the layers of the Lyman soil are as follows—

Surface layer:
0 to 3 inches, black highly decomposed leaves and twigs

Subsurface layer:
3 to 6 inches, reddish gray fine sandy loam

Subsoil:
6 to 13 inches, dark reddish brown fine sandy loam
13 to 17 inches, reddish brown gravelly fine sandy loam
17 inches, crystalline bedrock

Included with this unit in mapping are about 5 percent very deep, Monadnock and Becket soils between ridgetops and along side slopes. About 5 percent of this unit are very shallow Ricker soils and moderately steep or steep areas near bedrock exposures. Small areas of somewhat poorly drained and poorly drained seepage areas occur at the base of bedrock exposures and along drainageways. Also small inclusions of very stony areas, small escarpments, and areas without bedrock outcropping occur in this unit. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties of the Tunbridge soils—

Permeability: moderate or moderately rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally to 24 inches or bedrock contact
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Soil Propeties of the Lyman soils—

Permeability: moderately rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock depth
Shrink-swell potential: low
Depth to bedrock: 10 to 20 inches

Most areas of this unit are in woodland or brush.

This unit is poorly suited to growing cultivated crops and hay because of shallow soil and exposed bedrock including many surface stones. These surface features obstruct cultivation and cause severe wear on tillage and harvest equipment. Erosion may also be a significant problem in this area. Because of the shallow depth to bedrock and the strongly sloping condition, the potential for pesticide and nutrient loss from runoff on this soil is high. Stone clearing, conservation tillage systems, crop rotation, and the use of cover crops are good management practices.

This unit is poorly suited to pasture. Bedrock exposures and large surface stones make proper pasture management difficult. Forage growth and density are also adversely affected. Erosion is a serious management concern on the heavily traveled areas of these soils. Overgrazing should be discontinued to avoid significant sheet erosion. Key pasture species will also suffer from weed competition if grazing is left unchecked. Rotational grazing, proper stocking rates, and yearly mowing are good management practices.

The potential productivity for growing sugar maple on areas of Tunbridge soils is moderate. The potential productivity for growing red spruce on areas of Lyman soils is high. Windthrow can be a severe problem in areas of Lyman soil because of restricted root growth. The low available water capacity in Lyman soils may also cause seedling mortality in areas of this unit.

The main limitation if this map unit is used as a site for dwellings is the depth to bedrock. A better suited site would likely be on deeper areas such as nearby

Monadnock soils. In areas of this unit, dwellings with basements can be built above bedrock and landscaped with additional fill.

The main limitation if this unit is used as a site for local roads and streets is the depth to bedrock. To help lower the costs of construction, road designs can plan road location and grades to avoid major bedrock encounters. Blasting of rock will probably be necessary to allow for proper road bank stabilization and grading.

The main limitation if this unit is used as a site for septic tank absorption fields is depth to bedrock. A better suited site should be considered for this use. If this soil is used, deeper inclusions within this map unit or deeper nearby soils will likely reduce the chance of polluting surface and ground water supplies.

The main limitation if this unit is used as a site for shallow excavations is the depth to bedrock. Digging will be difficult because of the hardness of the bedrock and will necessitate blasting in most areas or bypassing shallower spots. Excavations should be routed through deeper nearby soils where possible.

The capability subclass is VIs.

TnE—Tunbridge-Lyman complex, steep, very rock

This unit consists of somewhat excessively drained to well drained, moderately deep and shallow soils. The Tunbridge soils formed in moderately deep deposits of loamy glacial till on hillsides and near ridgetops. The Lyman soils were formed from shallow deposits of loamy glacial till on ridgetops and other areas near bedrock. Exposures of bedrock cover 2 to 10 percent of the surface of this mapping unit. This unit consists of about 40 percent Tunbridge soils, 40 percent Lyman soils, and about 20 percent other soils. The Tunbridge and Lyman soils are so intermingled that it was not practical to map them separately. Slopes range from 15 to 35 percent, but are dominantly 25 to 35 percent.

The typical sequence, depth, and composition of the layers of the Tunbridge soil are as follows—

Surface layer:
0 to 1 inch, very dark brown fine sandy loam

Subsurface layer:
1 to 4 inches, reddish brown fine sandy loam

Subsoil:
4 to 9 inches, reddish brown gravelly loam
9 to 16 inches, yellowish red loam
16 to 26 inches, brown gravelly fine sandy loam
26 inches, crystalline bedrock

The typical sequence, depth, and composition of the layers of the Lyman soil are as follows—

Surface layer:
0 to 3 inches, black highly decomposed leaves and twigs

Subsurface layer:
3 to 6 inches, reddish gray fine sandy loam

Subsoil:
6 to 13 inches, dark reddish brown fine sandy loam
13 to 17 inches, reddish brown gravelly fine sandy loam
17 inches, crystalline bedrock

Included with this unit in mapping are about 5 percent very deep Monadnock and Becket soils between ridgetops and along side slopes. About 5 percent of this unit are very shallow Ricker soils and lesser sloping areas near bedrock exposures. Also

small inclusions of bedrock escarpments, very stony areas, and areas without bedrock outcropping occur in this unit. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties of the Tunbridge soils—

Permeability: moderate or moderately rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally to 24 inches deep or more
Shrink-swell potential: low
Depth to bedrock: 20 to 40 inches

Soil Properties of the Lyman soils—

Permeability: moderately rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: to bedrock depth
Shrink-swell potential: low
Depth to bedrock: 10 to 20 inches

Most areas of this unit are used as woodland or brush.

This unit is poorly suited to growing cultivated crops and hay because of the steep slopes and bedrock exposures. Bedrock exposures obstruct cultivation and cause severe wear on tillage and harvesting equipment. Erosion will likely be a significant problem on tilled areas. Because of the shallow depth to bedrock and its steeply sloping area, the potential for pesticide and nutrient loss from runoff on this soil is high.

This unit is poorly suited to pasture. The steep slopes and rocky surface make pasture management difficult. Forage density is also adversely affected. Erosion is a serious management concern especially on the heavily traveled areas of these soils. Overgrazing should be discontinued to avoid significant erosion. Rotational grazing and proper stocking rates are good management practices.

The potential productivity for growing sugar maple on areas of Tunbridge soils is moderate. The potential productivity for growing red spruce on areas of Lyman soils is high. Steep slopes will limit the use of heavy equipment and increase the potential for soil erosion. Seedling mortality is a moderate management concern because of the low available water holding capacity in the Lyman portion of this map unit. Only drought-tolerant species should be planted in this area. Logging roads should be built along the contour of the land, where possible, to prevent erosion.

The main limitations if this unit is used as a site for dwellings are slope and depth to bedrock. These moderately steep and steep slopes will require significant grading and landscaping expenses. Designing the dwelling to conform to the natural slope will save cost of construction and maintenance.

The main limitations if this unit is used as a site for local roads and streets are its steep slopes and shallow depth to bedrock. Routing new roads along the contour will help minimize construction costs. However, costs of grading and landscaping will be high for this unit in comparison to lesser sloping map units.

The main limitations if this unit is used as a site for septic tank absorption fields are its steep slope and its depth to bedrock. A better suited site should be considered for this use. If this unit is used, deeper inclusions and lesser sloping inclusions will likely reduce the chance of septic effluent polluting surface and ground water supplies.

The main limitations if this unit is used as a site for shallow excavations are its steep slope and shallow depth to bedrock. Maneuvering equipment on these slopes will be difficult and very risky at times. Blasting bedrock may be necessary in most

areas of this unit. Excavations should be routed through deeper nearby soils where possible.

The capability subclass 7s.

Ud—Udipsamments and Psammaquents, smoothed

This map unit is very deep and well drained to somewhat poorly drained. It consists of sand deposited along the Lake Champlain shoreline, and sand graded for recreation, runways, or other purposes. This unit typically consists of about 40 percent Udipsamments, 40 percent Psammaquents, and 20 percent other soils. However, some areas of this unit are dominantly Udipsamments while other areas may be mostly Psammaquents. Slopes range from 0 to 8 percent, but are dominantly 0 to 3 percent.

A typical sequence, depth, and composition of the layers of Udipsamments and Psammaquents are not provided because of variability from one place to another.

Included with this unit in mapping are small undisturbed soil areas including Plainfield, Grattan, Deerfield and Covert soils. Small areas of somewhat poorly drained Junius and poorly drained Gougeville soils are included in swales and drainageways. Also included are small areas covered by concrete, asphalt, bricks and other man-made material. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties of Udipsamments—

Permeability: varies in this unit, but generally is rapid or very rapid throughout the mineral soil; onsite investigation is needed
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: greater than 72 inches deep; on-site investigation needed
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches; onsite investigation is needed

Soil Properties of Psammaquents—

Permeability: varies in this unit, but generally is rapid or very rapid throughout the mineral soil; onsite investigation is needed
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: 12 to 18 inches deep at some time from November through May; onsite investigation is needed
Root zone: mainly to 18 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches; onsite investigation is needed

Sandy texture and low available water capacity make this unit poorly suited to cultivated crops, hay, and pasture. Areas of this unit are generally droughty and infertile unless reclaimed through topsoil restoration, organic matter amendment, fertilization or liming.

The potential productivity for growing eastern white pine on this unit is generally high. Onsite investigation is recommended. Seedling mortality may be severe because of very low available water capacity. Planting drought-tolerant seedlings during moist soil periods will help to minimize loss.

Because of variability in soil characteristics, onsite investigation is necessary to determine the suitability of this unit for community development. Rapid or very rapid

permeability may create conditions that allow for ground water pollution to occur in areas used for waste disposal.

This unit is not assigned a capability subclass.

Ue—Udipsamments, mine spoil, non-acid

This map unit is very deep, nearly level to steep, and well drained. It occurs dominantly in the Lyon Mountain area in association with past iron mining activities. Some mine spoil remains in the form of debris piles and some areas have been transported and smoothed as fill material. Slopes range from 0 to 35 percent.

The typical sequence, depth, and composition of the layers of this unit are variable, depending on the source of bedrock mined.

Included with this map unit are small areas of loamy cut and fill material (Udorthents). Small areas of undisturbed soil such as Sunapee and Adirondack soils are included near the fringe of this unit. Also included are small areas of strongly acid mine spoil. Included areas make up about 10 percent of this map unit and range up to 5 acres each.

Soil Properties—

Permeability: varies in this unit, but generally is rapid or very rapid throughout; onsite investigation is needed
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: greater than 72 inches deep; onsite investigation is needed.
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Variability of soil characteristics of this map unit make onsite investigations necessary to determine the potential of this unit for any use.

This unit is not assigned a capability subclass.

Uf—Udorthents, refuse substratum

This map unit is very deep and well drained. It commonly was developed on sandy outwash areas. Also referred to as a landfill or dump, it consists of layers of refuse alternating with layers of soil material. Slopes are dominantly 0 to 8 percent.

The typical sequence, depth, and composition of the layers of this unit are variable, depending on the availability of cover, method of operation, and other factors. Generally, about 12 inches of compacted garbage or refuse is covered by about 3 inches of soil material transported from a nearby location. At the end of each day a thicker layer of soil is graded over the work area.

Included with this map unit are small areas of loamy cut and fill material (Udorthents). Small areas of undisturbed soil such as Champlain soils are commonly included. Small areas of somewhat poorly drained soils are included in slight depressions within the unit. Also included are a few small areas used for disposal of human waste products and industrial sludge. Included areas make up about 10 percent of this map unit and range up to 5 acres each.

Soil Properties—

Permeability: variable, from slow to rapid; onsite investigation is needed
Available water capacity (average for 40-inch profile): very low

Depth to seasonal high water table: greater than 72 inches deep; onsite investigation is needed
Root zone: mainly to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Variability of soil characteristics of this map unit make onsite investigations necessary to determine the potential of this unit for any use.

This unit is not assigned a capability subclass.

Ug—Udorthents, smoothed

This map unit is very deep, nearly level to strongly sloping, and well drained. It occurs on a variety of landscapes and consists of construction projects, unpaved parking areas and fill material. Slopes range from 0 to 15 percent, but is dominantly 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this unit are variable depending on the source of materials, and therefore not provided here.

Included with this soil in mapping are small areas of somewhat poorly drained and poorly drained soils and fill material. Undisturbed soil areas are included in this unit. Small areas of concrete, asphalt, bricks, and other man-made material are also included. Included areas make up about 10 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: variable (ranges from slow to rapid in the surface, and slow to moderately rapid in the subsurface layers); onsite investigation is needed
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: greater than 36 inches deep at some time from November through June; onsite investigation is needed
Root zone: mainly to 20 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches; onsite investigation is needed

Variability of soil characteristics of this map unit make onsite investigation necessary to determine the potential of this unit for any use.

This unit is not assigned a capability subclass.

Uh—Udorthents, wet substratum

This map unit is very deep, nearly level or gently sloping and somewhat poorly drained. It occurs on a variety of landscapes and consists of construction projects, unpaved parking areas, and fill material. The fill material or overburden may be relatively thin; but, generally it occurs in slightly concave landscape positions. Slopes range from 0 to 8 percent.

The typical sequence, depth, and composition of the layers of this unit are variable depending on the source of fill, and therefore, not provided here.

Included with this unit in mapping are small areas of well drained and moderately well drained fill material on slightly convex positions. Small areas of poorly drained and very poorly drained soils are included in depressions and near drainageways. Small areas of concrete, asphalt, bricks, and other man-made material are included. Also included are small areas of sandy fill material and small areas of undisturbed soils. Included areas make up about 10 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: variable (ranges from slow to rapid in the surface, and slow to moderately rapid in the subsurface layers); onsite investigation is needed
Available water capacity (average for 40-inch profile): moderate
Depth to seasonal high water table: 12 to 36 inches deep at some time from October through July; onsite investigation is needed.
Root zone: mainly to 12 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches; onsite investigation is needed.

Variability of soil characteristics of this map unit make onsite investigation necessary to determine the potential of this unit for any use. This unit is not assigned a capability subclass.

Un—Urban land

Urban land consists of dominantly nearly level and gently sloping areas where at least 80 percent of the surface is covered with asphalt, concrete, buildings, and other impervious materials. These areas are mostly parking lots, shopping centers, industrial parks, and business areas within the City of Plattsburgh. Slopes range from 0 to 8 percent.

Included with this unit in mapping are small areas of Udorthents and Udipsamments consisting of land where grading and filling has taken place. Small areas of excessively drained Grattan and Plainfield soils are included on slightly higher undisturbed places. Small areas of moderately well drained Deerfield and Covert soils are included on slightly concave positions. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Onsite investigation is needed to determine specific soil properties of included soil within this map unit and its suitability for certain land uses.

A capability subclass is not assigned to this map unit.

UpA—Urban land-Plainfield complex, nearly level

This unit is composed of urban land in the form of buildings, streets, parking lots, etc., and very deep, excessively drained Plainfield soils. The Plainfield soils occur on sandy deltas, outwash plains, and terraces. This unit consists of about 50 percent urban land, 35 percent Plainfield soils, and 15 percent other soils. Urban land and Plainfield soils are so intermingled that it was not practical to map them separately. Slopes range from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of Plainfield soil are as follows—

Surface layer:
0 to 8 inches, very dark grayish brown loamy sand

Subsoil:
8 to 17 inches, dark yellowish brown sand 17 to 23 inches, yellowish brown sand

Substratum:
23 to 38 inches, yellowish brown sand
38 to 72 inches, pale brown sand

Included with this soil in mapping are about 5 percent Grattan soils having a more reddish brown subsoil. About 5 percent of this unit are moderately well drained Deerfield and Covert soils on slightly concave areas and near drainageways. Small areas of soils similar to Colton soils are included in more gravelly places. Small areas

of moderately well drained Occur soils are included where a loamy substratum exists. In some areas, the surface texture is sand, loamy fine sand and sandy loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties of the Plainfield soils—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are used for residential areas.

This unit is poorly suited to growing commercial cultivated crops and hay because of its residential character.

The Plainfield soils part of this unit is poorly suited to pasture because of its low available water capacity and its residential use. Droughtiness will seriously limit the available forage during summer.

The potential productivity for growing eastern white pine on areas of Plainfield soils is very high. Seedling mortality can be a severe management problem because of low available water capacity. Drought-tolerant trees should be considered for planting.

There are no major limitations if this unit is used as a site for dwellings with or without basements.

This unit has no major limitations for local roads and streets.

The main limitation if this unit is used as a site for septic tank absorption fields is its poor ability to filter effluent properly. A better suited site will be a nearby soil with moderately rapid permeability. Because of rapid permeability in the Plainfield part of this unit, there is a possibility of ground water contamination.

The main limitations if this soil is used as a site for shallow excavations is the tendency of the soil to cave in. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass for the Plainfield part of this unit is 3s.

UpB—Urban land-Plainfield complex, gently sloping

This unit is composed of urban land in the form of buildings, streets, parking lots, etc., and very deep, excessively drained Plainfield soils. The Plainfield soils occur on sandy outwash plains and terraces. This unit consists of about 50 percent urban land, 35 percent Plainfield soils, and 15 percent other soils. Urban land and Plainfield soils are so intermingled that it was not practical to map them separately. Slopes range from 3 to 8 percent.

The typical sequence, depth, and composition of the layers of Plainfield soil are as follows—

Surface layer:
0 to 8 inches, very dark grayish brown loamy sand

Subsoil:
8 to 17 inches, dark yellowish brown sand
17 to 23 inches, yellowish brown sand.

Substratum:
23 to 38 inches, yellowish brown sand
38 to 72 inches, pale brown sand

Included with this soil in mapping are about 5 percent Grattan soils having a more reddish brown subsoil. About 5 percent of this unit are moderately well drained Deerfield and Covert soils on slightly concave areas and near drainageways. Small areas of soils similar to Colton soils are included in more gravelly places. Small areas of moderately well drained Occur soils are included where a loamy substratum exist. In some areas, the surface texture is sand, loamy fine sand, and sandy loam. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties of the Plainfield soils—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this unit are used as residential areas.

This unit is poorly suited to growing commercial cultivated crops and hay because of its residential use.

This unit is poorly suited to pasture because of its low available water capacity and its residential use. Droughtiness will seriously limit available forage in the Plainfield part of this unit.

The potential productivity for growing eastern white pine on areas of Plainfield soils is very high. Seedling mortality is a severe management problem because of low available water capacity. Drought-tolerant trees should be considered for planting.

There are no major limitations if this this unit is used as a site for dwellings with or without basements.

This unit has no major limitations for local roads and streets.

The main limitation if this unit is used as a site for septic tank absorption fields is its poor ability to filter effluent properly. A better suited site should be considered such as a nearby soil with moderately rapid permeability. Because of rapid permeability in the Plainfield part of this unit, there is a possibility of ground water contamination.

The main limitations if this soil is used as a site for shallow excavations is the tendency of the soil to cave in. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass for the Plainfield part of this unit is 3s.

WdB—Waddington gravelly loam, 3 to 8 percent slopes

This very deep, gently sloping and somewhat excessively drained soil occurs on very gravelly, glacial outwash plains and beach ridges.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown gravelly loam

Subsoil:
9 to 17 inches, strong brown very gravelly fine sandy loam
17 to 26 inches, brown very gravelly loam
26 to 31 inches, dark brown very gravelly loamy sand

Substratum:
31 to 72 inches, mixed dark grayish brown, brown, and dark yellowish brown extremely gravelly coarse sand

Included with this soil in mapping are about 5 percent moderately well drained Fahey soils in slightly concave and nearly level areas. About 5 percent of this unit are Colosse and Trout River soils where the profile is more acid or sandy. About 5 percent of this unit are small areas of moderately well drained Hogansburg soils adjacent to loamy glacial till. Also included are small areas of sand over loamy deposits, nearly level areas of Waddington soils, and shallow deposits of gravel over loamy till. In some areas, the surface was cobbly loam or very gravelly loam. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderate in the mineral surface, moderately rapid in the upper part of the subsoil, and rapid in the lower part of the subsoil and substratum
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: greater than 72 inches deep
Root zone: generally unrestricted
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for hay or corn.

This soil is well suited to growing cultivated crops and hay. During dry periods, droughtiness can significantly reduce yields and increase weed competition. On long cultivated slopes, erosion may be serious enough to lower crop production if the soil surface is not protected from water movement. Because of the rapid permeability in the substratum, the potential for pesticide and nutrient loss from leaching in this soil is high. Conservation tillage systems, crop rotations, applications of manure, and the use of cover crops are good management practices.

This soil is well suited to pasture. Mild droughtiness during the summer may threaten optimum forage production on this soil. Overgrazing should be avoided. Rotational grazing, proper stocking rates, and yearly mowing are good management practices.

The potential productivity for growing sugar maple on this soil is moderate. Tree species tolerant to short periods of droughtiness should be encouraged.

There are no major limitations if this soil is used as a site for dwellings with or without basements.

A moderate limitation if this soil is used as a site for local roads and streets is frost action. Construction plans should specify sandier subgrade material. Adequate surface drainage in critical areas will also control potential frost action.

The main limitation if this soil is used as a site for septic tank absorption fields is the rapid permeability in the substratum. Because of rapid permeability in the substratum, there is a possibility of ground water contamination.

The main limitation if this soil is used as a site for shallow excavations is the tendency of the soil to cave in. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 3s.

Wn—Wainola loamy fine sand

This very deep, nearly level, and somewhat poorly drained soil is formed in sandy deposits on relatively low and slightly concave areas of glacial outwash plains and lake plains. Slopes range from 0 to 3 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, black slightly decomposed roots and leaves

1 to 4 inches, black loamy fine sand

Subsurface layer:
4 to 7 inches, reddish gray and pinkish gray fine sand

Subsoil:
7 to 10 inches, dark reddish brown loamy fine sand with common mottles
10 to 12 inches, reddish brown fine sand with common mottles
12 to 22 inches, strong brown fine sand with many mottles
22 to 34 inches, brown fine sand with common mottles

Substratum:
34 to 72 inches, light brownish gray fine sand with few mottles

Included with this soil in mapping are about 5 percent moderately well drained Croghan soils on slightly higher positions. About 5 percent of this map unit consist of poorly drained Deinache soils near depressions and drainageways. Small areas of Coveytown soils are included where a loamy substratum occurs. Small areas of Swanton soils are included where a clayey substratum is within 40 inches. Also on similar landforms are inclusions of Sciota soils which are less reddish brown in the subsoil. Inclusions make up about 20 percent of this map unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid throughout the mineral soil
Available water capacity (average for 40-inch profile): low to moderate
Depth to seasonal high water table: 12 to 18 inches deep at some time from November through May
Root zone: mainly to 18 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used for hay or corn. Some areas are in brush or woodland. Only drained areas of this soil qualify as prime farmland.

This soil is moderately suited to growing cultivated crops and hay. The seasonal high water table can delay planting in the spring and harvest in the fall. Surface and subsurface drainage will help to improve farm operation efficiency and increase crop yield. Conservation tillage systems, crop rotation, and maintenance of drainageways are good management practices.

This soil is moderately suited to pasture. The seasonal high water table may limit forage production. Excessive grazing on this soil may result in compaction, muddy conditions, soil erosion, and loss of key forage species. Rotational grazing, deferred grazing, proper stocking rates, maintenance of drainageways, and yearly mowing are good management practices.

The potential productivity for growing red maple on this soil is moderate. Heavy equipment may bog down under wet soil conditions causing erosion. Limited rooting depth because of the seasonal high water table may affect seedling growth and increase windthrow in some areas. Selecting species tolerant to wet soil conditions will help improve seedling survival. A minimal amount of thinning will also diminish the windthrow potential.

The main limitation if this soil is used as a site for dwellings is the seasonal high water table. Better suited sites on higher nearby areas should be considered. If this soil is used, foundation drains and protective coatings on basement walls will alleviate some wetness. Diversion ditches can also control surface water by carrying it away from the dwelling.

Moderate limitations if this soil is used as a site for local roads and streets are the

seasonal high water table and frost action. Constructing roads on a raised coarse-grained subgrade, and installing adequate drainage in critical areas will alleviate wetness and frost action.

The main limitations if this soil is used as a site for septic tank absorption fields are the seasonal high water table and the soil's poor ability to filter effluent properly. A better suited site should be considered. Conventional septic system designs will perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered. Because of the rapid permeability of the soil, there is a possibility of ground water contamination.

The main limitation if this soil is used as a site for shallow excavations is the seasonal high water table and the tendency of the soil to cave in. Digging operations may be restricted to drier periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur because of wetness. Trench walls should be mechanically supported to avoid the possibility of soil caving in on workers or other victims.

The capability subclass is 3w.

WsB—Wallace fine sand, 3 to 8 percent slopes

This very deep, gently sloping and well drained soil occurs on sandy glacial outwash plains and terraces.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, black fine sand

Subsurface layer:
2 to 8 inches, pinkish gray fine sand

Subsoil:
8 to 16 inches, dark brown and dark reddish brown fine sand
16 to 21 inches, dark reddish brown fine sand
21 to 33 inches, dark yellowish brown sand

Substratum:
33 to 42 inches, yellowish brown sand
42 to 72 inches, yellowish brown fine sand

Included with this soil in mapping are about 10 percent Adams soils where there is little or no cementation in the subsoil. About 5 percent Colton soils are included in areas that are more gravelly near streams and valley side slopes. Small areas of moderately well drained Croghan soils are included in slight depressions and drainageways. Narrow inclusions of steeper slopes are included in some areas. Also in some areas, the surface texture is sand, loamy sand or loamy fine sand. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the mineral surface, moderate or moderately rapid in the subsoil, and rapid in the substratum
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: mainly within 8 inches deep; but, limited by degree of cementation in the subsoil
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are used as woodland.

This soil is moderately suited to growing cultivated crops and hay. Droughtiness can significantly limit crop production because of this soil's very low available water capacity. Also, its cemented subsoil can impede the depth of root growth for many crops. Amendments of organic matter will improve the moisture holding ability of this soil. Because of rapid permeability, the potential for pesticide loss from leaching in this soil is high. Conservation tillage systems, crop rotation, manure application according to crop needs, and the use of cover crops are good management practices.

This soil is moderately suited to pasture. Droughtiness can adversely affect the quantity and quality of forage. Root growth may also be somewhat limited by the cemented subsoil. Rotational grazing, proper stocking rates, and yearly mowing are good pasture management practices on this soil.

The potential productivity for growing eastern white pine on this soil is high. Because of very low available water capacity, this droughty soil can have a moderate seedling mortality. New plantings during moist soil conditions will have better survival rates. Included areas of Croghan soils generally have less seedling mortality. Because of the high sand content in this soil, the type of equipment to be used may need to be carefully selected to obtain maximum traction and stability. Root growth may be limited in some areas to shallow depths by a cemented subsoil. Shallow rooting depths may slightly increase the risk of windthrow. Windthrow can be controlled by avoiding excess thinning or clearcutting practices.

The main limitation if this unit is used as a site for dwellings with basements is the presence of a cemented subsoil. This hard layer may increase the cost of excavating for basements and for landscaping around the structure.

The main limitation if this unit is used as a site for local roads and streets is the cemented subsoil. Grading, smoothing, and seeding of road banks may be more expensive because of this cemented soil layer. Additional topsoil on road banks for vegetative cover may be needed.

The main limitations if this unit is used as a site for septic tank absorption fields are the cemented subsoil and its poor ability to filter effluent properly. A nearby soil with moderately rapid permeability may perform better for absorption fields. Cemented subsoil may cause lateral movement of poorly treated effluent to a nearby water supply. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered. There is a possibility of ground water contamination because of rapid permeability.

The main limitations if this soil is used as a site for shallow excavations are the danger of cut banks caving in and the presence of a cemented subsoil. Mechanical support to shore up trench walls should be considered to protect workers and other possible victims from the soil caving in. This soil may be more expensive to dig than the more friable Adams soils.

The capability subclass is 6s.

WsC—Wallace fine sand, 8 to 15 percent slopes

This very deep, strongly sloping, and well drained soil occurs on side slopes of sandy outwash plains and terraces.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, black fine sand

Subsurface layer:
2 to 8 inches, pinkish gray fine sand

Subsoil:
8 to 16 inches, dark brown and dark reddish brown fine sand
16 to 21 inches, dark reddish brown fine sand
21 to 33 inches, dark yellowish brown sand

Substratum:
33 to 42 inches, yellowish brown sand
42 to 72 inches, yellowish brown fine sand

Included with this soil in mapping are about 10 percent Adams soils where there is little or no cementation in the subsoil. Colton soils are included in areas that are more gravelly near streams and valley side slopes. Narrow inclusions of steeper slopes are included in some areas. Also in some areas, the surface is sand, loamy sand, or loamy fine sand. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the mineral surface, moderate or moderately rapid in the subsoil, and rapid in the substratum
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: mostly within 8 inches deep; but, limited by degree of cementation in the subsoil
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland.

This soil is poorly suited to growing cultivated crops and hay. Droughtiness can significantly limit crop production because of this soil's very low available water capacity. Also, its cemented subsoil can impede the depth of root growth for many crops. Erosion can also be a management concern on long slopes that are cultivated. Because of rapid permeability, the potential for pesticide loss from leaching in this soil is high. Conservation tillage systems, crop rotation, stripcropping, timely manure application according to crop needs, and the use of cover crops are good management practices.

This soil is poorly suited to pasture. Droughtiness can adversely affect the quantity and quality of forage. Root growth may also be somewhat limited by the cemented subsoil. Erosion can be problem in heavily traveled areas of the pasture. Rotational grazing, proper stocking rates, and yearly mowing are good management practices on this soil.

The potential productivity for growing eastern white pine on this soil is high. Because of the very low available water capacity, this droughty soil can have a moderate seedling mortality. New plantings during moist soil conditions will have better survival rates. Because of the high sand content in this soil, the type of equipment to be used may need to be carefully selected to obtain maximum traction and stability. Root growth may be limited in some areas to shallow depths by a cemented subsoil. Shallow rooting depths increase the risk of windthrow. Windthrow can be controlled by avoiding excess thinning or clearcutting practices.

The main limitation if this soil is used for dwellings with basements is the presence of a cemented subsoil. This hard layer may increase the cost of excavating for basement and landscaping around structures.

The main limitation if this soil is used as a site for local roads and streets is the cemented subsoil. Grading, smoothing, and seeding of road banks may be more expensive because of this cemented layer. Additional topsoil on road banks for vegetative cover may also be needed.

The main limitations if this soil is used as a site for septic tank absorption fields are its cemented subsoil and its poor ability to filter effluent properly. A nearby soil with moderately rapid permeability may perform better for absorption fields. Cemented subsoil may cause lateral movement of poorly treated effluent to a nearby water supply. Conventional septic system designs may perform poorly on this soil. Alternative designs that augment the filtering capacity of this system should be considered. There is a possibility of ground water contamination because of rapid permeability.

The main limitations of this soil is used as a site for shallow excavations are the danger of cut banks caving in and the presence of a cemented subsoil. Mechanical support to shore up trench walls should be considered to protect workers and other possible victims from the soil caving in. This soil may be more expensive to dig than the more friable Adams soils.

The capability subclass is 6s.

WsE—Wallace fine sand, 25 to 35 percent slopes

This very deep, moderately steep, and well drained soil occurs on steep side slopes of stream dissected sandy outwash plains.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, black fine sand

Subsurface layer:
2 to 8 inches, pinkish gray fine sand

Subsoil:
8 to 16 inches, dark brown and dark reddish brown fine sand
16 to 21 inches, dark reddish brown fine sand
21 to 33 inches, dark yellowish brown sand

Substratum:
33 to 42 inches, yellowish brown sand
42 to 72 inches, yellowish brown fine sand

Included with this soil in mapping are about 10 percent Adams soils where there is little or no cementation in the subsoil. Colton soils are included in areas that are more gravelly near streams and footslopes. Narrow inclusions of moderately steep and very steep slopes are included in some areas. Also included are soils similar to Fernlake and Hermon soils where stratification is lacking. Also in some areas, the surface is sand, loamy sand, or loamy fine sand. Included areas make up about 15 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: rapid in the mineral surface, moderate or moderately rapid in the subsoil, and rapid in the substratum
Available water capacity (average for 40-inch profile): very low
Depth to seasonal high water table: greater than 72 inches deep
Root zone: mostly within 8 inches deep; but, limited by degree of cementation in the subsoil
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland.

This soil is poorly suited to growing cultivated crops and hay. Steep slopes, a

partially cemented subsoil, and droughtiness will severely limit this soil for plant growth and good management.

This soil is poorly suited to pasture. Because of steep slopes, this unit is difficult to properly managed using such practices as yearly mowing. Droughtiness can also significantly limit forage quantity and quality. Serious soil erosion can occur on heavily traveled areas of the pasture. Rotational grazing and proper stocking rates are important practices on this soil.

The potential productivity for growing eastern white pine on this soil is high. Because of very low available water capacity, this droughty soil can have a moderate seedling mortality. Steep slopes commonly cause difficult and unsafe conditions for equipment operation. Because of the high sand content in this soil, the type of equipment to be used may need to be carefully selected to obtain maximum traction and stability. Root growth may be limited in some areas to shallow depths by a cemented subsoil. Shallow rooting depths increase the risk of windthrow. Windthrow can be controlled by avoiding excess thinning or clearcutting practices.

The main limitations if this unit is used as a site for dwellings are steep slopes and a cemented subsoil. A less sloping inclusion or nearby area would be better suited for this use. Buildings should be designed to conform to the natural slope so as to minimize both landscaping costs and fill needed around the structure. Cemented subsoil material will require additional energy and/or topsoil to properly grade and landscape around buildings.

The main limitations if this unit is used as a site for local roads and streets are steep slopes and the cemented subsoil. New roads should be routed around this unit where possible to save on construction costs. Grading and smoothing of road banks will be more expensive on this soil than lesser sloping areas. Cemented subsoil material on roadbanks may be difficult to grade and seed without additional topsoil.

The main limitations if this soil is used as a site for septic tank absorption fields are steep slopes, the cemented subsoil, and the soil’s poor ability to filter effluent properly. A better suited site should be considered for this use. There is a possibility of ground water contamination because of rapid permeability and lateral movement of poorly treated effluent over the cemented soil layer.

The main limitations if this soil is used as a site for shallow excavations are the steep slopes, the danger of cut banks caving in, and the cemented subsoil. The area of this map unit should be circumvented, wherever possible. Mechanical support to shore up trench walls should be considered to protect workers and other possible victims from a cave in. This soil will be more expensive to dig than the more friable Adams soils. These steep slopes represent more difficult and dangerous areas on which to maneuver digging equipment.

The capability subclass is 7s.

W—Water

This map unit represents areas of water up to 40 acres. The depth of water is generally greater than 1.0 foot throughout the year, supporting various aquatic species. Areas of water larger than 40 acres are labeled by designated name.

Wu—Wonsqueak muck

This very deep, nearly level, and very poorly drained soil consists of highly decomposed organic material over mineral soil on depressions of glacial till, glacial outwash, and lake plains. Slopes range from 0 to 2 percent.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 7 inches, black muck

Subsurface layer:
7 to 31 inches, very dark brown muck

Substratum:
31 to 72 inches, dark gray silt loam

Included with this soil in mapping are about 10 percent Sabattis, Runeberg, Tughill, and Adjidaumo soils along the fringe and narrow areas of this unit. About 5 percent Bucksport soils occur in larger depressions and bogs. Small areas of somewhat poorly drained Chazy and Topknot soils occur near bedrock outcrops. Small areas of Medomak soils occur along streams. Also included are small areas similar to Beseman soils that are slightly more acid. Included areas make up about 20 percent of this unit and range up to 5 acres each.

Soil Properties—

Permeability: moderately slow to moderately rapid in organic part, and moderately slow or moderate in the mineral substratum
Available water capacity (average for 40-inch profile): high
Depth to seasonal high water table: 12 inches above the surface to 6 inches below the surface from September through July
Root zone: mainly to 12 inches deep
Shrink-swell potential: low
Depth to bedrock: greater than 60 inches

Most areas of this soil are in woodland.

This soil is poorly suited to growing cultivated crops and hay because of the seasonal high water table. The surface is covered by water during most of the growing season. Outlets for drainage systems may be very difficult to establish without adversely affecting important wetlands.

This soil is poorly suited to pasture. The seasonal high water table is near the surface during most of the growing season. Areas of this soil will not support typical forage species. Ground conditions are generally too soft for livestock traffic resulting in poor grazing and soil erosion. Drier areas should be considered for this use.

The potential productivity for growing black spruce on this soil is moderate. However, these organic soils have insufficient bearing strength for heavy timber equipment allowing for deep ruts and erosion when crossed. Because of the seasonal high water table, seedling mortality is severe except for water tolerant species. Root growth is restricted to a shallow depth in this wet soil making windthrow a likely occurrence.

The main limitations if this soil is used as a site for dwellings are the seasonal high water table and its tendency to subside over time. A better suited site should be considered such as a higher area nearby.

The main limitations if this soil is used as a site for local roads and streets are its tendency to subside over time, ponding, and its potential frost action. Roads should be routed around this map unit where possible. If this soil is used, roads should be constructed on raised coarse-grained fill material with adequate drainage installed.

The main limitations if this soil is used as a site for septic tank absorption fields are ponding and its moderately slow permeability. A better suited site on a higher position of the landscape should be considered for this use.

The main limitations if this soil is used as a site for shallow excavations are ponding and the excess organic material. Digging operations will likely be limited to dry periods of the year unless drainage is installed. Sloughing of soil in the excavated area may also occur. Because of high organic content, this soil will present great

difficulty in maneuvering conventional digging equipment, and may require special excavation machinery.

The capability subclass is 7w.

Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation’s short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation’s prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

About 100,000 acres in the survey area, or nearly 14 percent of the total acreage, meets the soil requirements for prime farmland. Scattered areas of this land are throughout the county. But most are in the northern and eastern parts, mainly in general soil map units 5, 6, and 11. Many of the farmed areas qualifying as prime farmland have surface or subsurface drainage systems in place.

A recent trend in land use in some parts of the survey area has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

The map units in the survey area that are considered prime farmland are listed in table 5. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in table 4. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described under the heading “Detailed Soil Map Units.”

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as rangeland and forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; for agricultural waste management; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are verbal.

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *slight, moderate,* and *severe*. The suitability ratings are expressed as *good, fair,* and *poor*.

Crops and Pasture

This section was prepared by Greg Garvey, District Conservationist for the Natural Resources Conservation Service and Dr. W. Shaw Reid, Professor in the Department of Soil, Crop, and Atmospheric Sciences at Cornell University.

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops and pasture plants are listed; the system of land capability classification used by the Natural Resources Conservation Service is explained; and prime farmland is described.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading “Detailed Soil Map Units.” Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

The total land in farms within Clinton County in 1992 was 166,000 acres. Approximately 57 percent of that total, or 94,000 acres was cropland or permanent pasture. The remaining 71,000 acres was woodland or other land (New York State Department of Agriculture and Markets, 1993).

The acreage in crops and pasture has declined in the last few decades due to non-farm development and idling. There is a continuing trend towards fewer but larger farms. This is similar to national trends.

Poor drainage is the major limitation of soils used in Clinton County for agricultural production. For about two-thirds of the cropland and pasture acres in the county, excessive soil wetness is a major management concern.

The removal of excess water from the soil increases the productivity of farmland. Most soils with drainage limitations do not become dry enough to sow until late in the planting season. It has been shown that late planting of corn reduces yields about one bushel per day after mid-May. A well-designed and maintained drainage system allows for timelier field management, and reduces soil compaction, excess water stress, and denitrification losses. The longevity of legumes such as alfalfa in a forage crop is generally reduced in wetter soils. Improved soil drainage can improve crop quality, as well as quantity. Overall, yields of commonly grown crops on drained soils are as high, or higher than on naturally drained soils in Clinton County.

Some soils are either saturated with water or exhibit surface water ponding during the growing season. Production of crops is generally not possible on these poorly drained or very poorly drained soils without extensive drainage improvements. Examples are Medomak, Adjidaumo, Runeberg, and Cook soils. Management of drainage in conformance with regulations that are designed to protect wetlands will require additional planning, and may require special permits from local, state, or federal government agencies.

Surface drainage practices such as land smoothing and the construction of drainage outlets and field ditches are effective on soils such as the poorly drained Adjidaumo soils, and the somewhat poorly drained Muskellunge and Coveytown soils.

Subsurface drainage systems involve the installation of corrugated plastic drainage tubing in either a random or pattern design. The most appropriate design varies with the soil type and structure as well as the crops being grown. Random drainage systems are effective on somewhat poorly drained soils such as Appleton, Hailesboro, and Malone soils being used for apple production. Some areas of sloping soils such as moderately well drained Schroon and Hogansburg soils contain wet spots. Drainage on these soils can be improved by installing random drains to intercept subsurface seepage.

Pattern drainage systems are effective on nearly level, poorly drained or somewhat poorly drained soils like Adjidaumo, Coveytown, Malone, Muskellunge, and Peasleeville. The spacing of drain lines in a pattern system is determined by the permeability of the soil and the crop being grown. Drains must be more closely spaced in slowly permeable soils such as silty clay loam to clay soils. Establishing drainage outlets is sometimes difficult and expensive because of the low position of these soils on the landscape.

For optimum yields of corn and hay crops, a combination of surface and subsurface drainage is needed on poorly drained and very poorly drained soils.

Information and technical assistance on drainage systems is available at the Clinton County Soil and Water Conservation District office.

Surface stones, boulders, and bedrock outcrops limit the use of some soils for crops and pasture. They interfere with the operation of tillage, planting and harvesting

equipment. Soils of the Neckrock-Summerville complex, and the Irona-Conic complex are examples of shallow to bedrock or bedrock outcrop areas that limit the management of land for crops or pasture. Schroon, Bice, Peasleeville and Lyonmounten are the principle soils in this county that are stony enough to interfere with the operation of tillage equipment.

Erosion is a hazard on roughly 10 percent of the farmland in the county. The rate of erosion is related to the length and percent of slope of the land, the soil type and texture, the amount and intensity of the rainfall, and the type and density of vegetative cover. Appleton, Bice, Monadnock, and Schroon soils on 3 to 8 percent or 8 to 15 percent slopes have the potential for high rates of soil erosion when under regular cultivation.

Limiting the number of years of tillage in a corn-hay rotation can resolve the majority of erosion problems on a typical dairy farm in Clinton County. Contour farming, no-till and conservation tillage practices help to reduce erosion on sloping soils with adequate drainage. A local representative of the Natural Resources Conservation Service or the Soil and Water Conservation District can assist in planning an effective combination of practices to reduce soil erosion.

Soil tilth is an important factor in the emergence of seedlings, the infiltration of water, and the ease of cultivation. Soils with good tilth usually have granular structure and are porous. Organic matter is usually important in maintaining good soil tilth. Excessive tillage tends to reduce the organic matter content and breaks down soil structure. Some very deep, well drained or excessively drained, coarse texture soils, such as Colosse or Adams, can be tilled with little or no damage to tilth. However, wetter, fine textured and moderately fine textured soils—for example, Heuvelton, Muskellunge, and Hailesboro soils—must be tilled at the proper moisture content to prevent deterioration of natural soil structure. Plowing or cultivating these soils when too wet causes puddling, and when too dry, results in surface crusting and clodding.

Fertility in the soils in the county is enhanced by lime and fertilizer. The amount needed depends on the natural content of lime and plant nutrients, the needs of the particular crop, and the level of desired yield. The organic matter content of the soil is one measure of fertility. The content in the surface layer of the soils in Clinton County averages about 4 percent as compared to a state average of about 3 percent. Poorly drained and very poorly drained soils, such as Cook, Runeberg, and Sabattis soils, have a somewhat higher organic matter content.

For the complex forms of soil organic nitrogen to be made available to plants, the organic matter must be decomposed or mineralized by microorganisms. Nitrogen fertilizer is needed to supplement the nitrogen normally mineralized from the soil organic matter for high nitrogen requiring crops such as corn. Management that builds up the supply of organic matter, such as the use of green-manure crops, sod crops, and crop residue, maintains or improves the natural nitrogen content (Cornell Cooperative Extension Service, 1978).

Timeliness of nitrogen fertilization is important for maximum utilization by plants. Nitrogen can be lost through leaching in rapidly permeable soils, such as Waddington, or by denitrification in wetter and less permeable soils, such as Muskellunge. Best results are obtained when small amounts of nitrogen are applied at timely intervals; for example, at planting and then as a side dressing for corn while the crop is growing.

The soils in Clinton County are generally low in natural phosphorus. Coarse textured Colosse and Trout River soils, for example, are very low in native phosphorus. The addition of appropriate amounts of phosphate in the form of commercial fertilizer is essential for good plant growth.

Most of the soils have a low to medium level of available potassium; but, such soils as Muskellunge and Adjidaumo soils, which have a clayey subsoil, may be somewhat higher in available potassium content. Even soils that have a fairly high content of

potassium, however, require additional potassium for optimum yields of most crops because of the slow release of potassium from the clay minerals.

Lime is needed in most of the soils in Clinton County to raise the topsoil pH to an acceptable level for optimum yields of most crops.

Additions of lime and fertilizer should be based on soil tests. For assistance in obtaining soil tests and recommendations, farmers and others should consult the local Cornell Cooperative Extension Agent. New research findings and fertilizer recommendations are available in the current edition of "Cornell Recommends for Field Crops," prepared by the staff of the New York College of Agriculture, Cornell University (Cornell Cooperative Extension Service, 1978). In the absence of soil tests, these references, along with this publication, can be used as a guide in estimating the lime and fertility needs.

Orchards

This section was prepared by Frank McNicholas, Fruit Consultant, and retired Cornell Cooperative Extension Agent.

Apple orchards are an important part of agriculture in Clinton County. The largest portion of nearly 3,600 acres of orchards is located in the Town of Peru.

Apples do well on a wide range of well drained to moderately well drained soils from sandy loam to silty clay loam. Many of the successful orchards are on Amenia, Bombay, Hogansburg, and Malone soils. These are very deep, loamy soils with a fairly high fertility level. Poorly drained soils such as Adjidaumo and Runeberg soils are more difficult to manage because of a seasonal high water table. Therefore, poorly drained soils are normally avoided when selecting future orchard sites.

Apple trees have been grown commercially in Clinton County since the late 19th century. Growers are steadily removing older varieties, and replanting dwarf and semi-dwarf rootstocks on better sites. Planting density is now at 200 to 500 trees per acre, compared to 50 to 60 trees per acre in older plantings.

Liming, nutrient improvement, and installation of subsurface drainage are very important management practices for growth of young orchards. Some orchard soils are known to be low in calcium, potassium, or magnesium. If soil tests reveal a deficiency in any of these elements, supplements should be applied and worked into the soil one or two years before planting. A complete drainage system installed prior to planting in moderately well or somewhat poorly drained soils will often improve tree growth and early apple production. Orchards on well drained soils may also respond favorably to selective or random drainage where somewhat poorly drained inclusions occur in lower lying areas.

Establishment of young orchards is very expensive when all costs are considered. Both early production and rapidly increased production are necessary for profitability. Good orchard management on suitable soils will likely yield 900 to 1,000 bushels per acre 8 years after planting. Production on most somewhat poorly drained soils will probably range from 400 to 500 bushels per acre. The following data represent typical yields for apples in bushels per acre:

Soil	drained	undrained
Bombay	1,000	900
Appleton	800	725
Adams	800	800
Colton	800	800
Hogansburg	1,000	900
Fahey	800	725
Kingsbury	800	650
Swanton	800	550

The most recent information and suggestions for growing orchard and vegetable crops and the estimated potential yields of these crops can be obtained from the local offices of Cornell Cooperative Extension and the Natural Resources Conservation Service.

Yields per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 6. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

For yields of irrigated crops, it is assumed that the irrigation system is adapted to the soils and to the crops grown, that good-quality irrigation water is uniformly applied as needed, and that tillage is kept to a minimum.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in table 6 are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

The *productivity index* is a relative rating of the capacity of a soil to produce a specific plant under a defined management system. The index is determined from yield data on a few benchmark soils and is used to calculate yields, the net returns from crops, land assessment values, and taxes and to perform risk analysis when land management decisions are made.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c,* used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w, s,* or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

Capability units are soil groups within a subclass. The soils in a capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, 2e-4 and 3e-6. These units are not given in all soil surveys.

The acreage of soils in each capability class or subclass is shown in table 4. The capability classification of map units in this survey area is given in the section "Detailed Soil Map Units" and in table 6.

Hydric Soils

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed.

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for each of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding

long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 1995). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in “Soil Taxonomy” (USDA, 1999) and “Keys to Soil Taxonomy” (USDA, 1992) and in the “Soil Survey Manual” (USDA, 1993).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils in this survey area are specified in “Field Indicators of Hydric Soils in the United States” (Hurt and others, 1996).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

The following map units meet the definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 1996).

Ak	Adjidaumo silty clay
Am	Adjidaumo mucky silty clay
Bo	Beseman mucky peat
Bx	Bucksport mucky peat
Ck	Churubusco muck
Crk	Cook mucky loamy fine sand
Df	Deinache fine sand
Fn	Fluvaquents - Udifluvents complex, frequently flooded
Gl	Gougeville mucky loamy fine sand
Le	Loxley mucky peat
Lv	Lyonmounten loam
Ly	Lyonmounten loam, very stony
Mk	Markey muck
Mp	Medomak silt loam, stratified substratum
Pg	Pinconning mucky loamy fine sand
Ry	Runeberg mucky loam
Sb	Sabattis mucky fine sandy loam, very bouldery
Se	Saprists and Aquents, ponded
Wu	Wonsqueak muck
15	Loxley-Beseman complex
17	Beseman-Rumney-Loxley complex
367	Searsport-Borosaprists-Naumburg complex
651C	Monadnock-Tunbridge-Sabattis complex, rolling, very bouldery.

654C Monadnock-Sabattis complex, rolling, very bouldery
708B Adirondack-Sabattis-Tughill complex, 0 to 8 percent slopes, very bouldery
943C Rawsonville-Borosaprists-Ricker complex, 0 to 25 percent slopes, very rocky

Map units that are made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The following map units, in general, do not meet the definition of hydric soils because they do not have one of the hydric soil indicators. A portion of these map units, however, may include hydric soils. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.

AgB Adirondack loam, 3 to 8 percent slopes
AhB Adirondack loam, gently sloping, very bouldery
AwA Appleton loam, 0 to 3 percent slopes
AwB Appleton loam, 3 to 8 percent slopes
Crr Cornish silt loam
CvA Coveytown loamy sand, 0 to 3 percent slopes
CvB Coveytown loamy sand, 3 to 8 percent slopes
CwB Coveytown loamy sand, gently sloping, very stony
Ha Hailesboro silt loam
HgC Hermon–Adirondack complex, strongly sloping, very bouldery
Jn Junius fine sand
Kr Kingsbury–Rhinebeck complex
MeA Malone gravelly loam, 0 to 3 percent slopes
MeB Malone gravelly loam, 3 to 8 percent slopes
MfB Malone gravelly loam, gently sloping, very stony
Mn Massena fine sandy loam
Ms Mino loam
MwA Muskellunge silty clay loam, 0 to 3 percent slopes
MwB Muskellunge silty clay loam, 3 to 8 percent slopes
NrA Northway loamy fine sand, 0 to 3 percent slopes
NrB Northway loamy fine sand, 3 to 8 percent slopes
OgB Ogdensburg silt loam, 0 to 8 percent slopes
PeA Peasleeville loam, 0 to 3 percent slopes
PeB Peasleeville loam, 3 to 8 percent slopes
PfB Peasleeville loam, gently sloping, very stony
Ph Pipestone fine sand
Pn Pits, gravel
Po Pits, quarry
Pp Pits, sand
Rr Roundabout silt loam
Sn Sciota fine sand
So Shaker loam
Sz Swanton very fine sandy loam
TcB Topknot–Chazy complex, gently sloping, rocky
Ud Udipsamments and Psammaquents, smoothed
Uh Udorthents, wet substratum
Wn Wainola loamy fine sand
727B Skerry–Adirondack complex, 0 to 8 percent slopes, very bouldery
931C Mundalite–Rawsonville–Worden complex, 3 to 15 percent slopes, very bouldery
933C Mundalite–Worden complex, 3 to 15 percent slopes, very bouldery

Woodland Capability, Management and Productivity

This section was prepared by John A. Dickerson, Plant Materials Specialist and Forester, Natural Resources Conservation Service.

The mixed coniferous and deciduous forests of Clinton County represent the natural climax vegetation of the region. Without the intervention of man, Clinton County would be almost 100 percent forested. The soils of the county were formed under the influence of forest ecosystems, and in some areas tend to be acidic with low nutrient status and moderate organic matter content. Moderate to low water holding capacity is partly offset by a cool, damp climate. Typical of forest ecosystems, the preponderance of carbon, nutrients and energy is found in the standing timber biomass.

The soils of Clinton County which remain forested today tend to be shallow, stony, wet, droughty, or steep—these are limitations to farming and forestry. These soil areas and associated surface waters are vulnerable to damage during and after logging operations unless planned conservation measures are utilized. Catastrophic fire, insect or disease outbreaks, or severe weather are also threats to the soil resources. When damage occurs to forest soils, the net effect on productivity is greater than would occur on better soils, and recovery takes longer.

The Adirondack Forest Preserve covers roughly half of Clinton County, affecting farm and forest policy within the boundary. Recreation and tourism are dependent upon quality water and a healthy forestry resource. The interrelationship between soil protection, productive forest resources, and quality water resources is vital to long term sustainability of the forest products and recreation industries of the county.

Forest owners can protect their investment and the future productivity of their soils using planned forest management. Planning assistance is available from service foresters, soil conservationists, and consulting foresters. The Clinton County Soil and Water Conservation District will direct landowners to the assistance they need.

The US Forest Service has classified 412,400 acres (about 62 percent) of the county as timberland in their 1993 survey (preliminary data). This compared to 465,100 acres in the 1980 survey, and is in conflict with a statewide trend in reversion of openland to forestland. Part of the change may be accounted for in the increase by 38,000 acres, of land ownership by the state, and newly designated 5,500 acres of unproductive land. Ownership of forestland in Clinton County is roughly 68 percent non-industrial private forest, 27 percent industrial, and 5 percent state. The forest types of Clinton County can be characterized as follows (*Preliminary results of the 1993 USDA Forest Service inventory of NY forest resources. Sampling error ranged from 11.6 percent to 100 percent*):

type	acres
oak	27,000
northern hardwoods	217,200
aspen-birch	67,700
white-red pine	42,700
spruce-fir	47,500

Stands of trees in the county are stocked with:

sawtimber (min. 9 inch dia. sftwd, 11 in. dia. hdwd)	27 percent
poletimber (min 5 in. dia.)	56 percent
seedling (under 5 in. dia.)	17 percent
non-stocked (less than 16.7 percent tree density)	0 percent

The soils of Clinton County which are suitable for wood crops are shown in table 7. Woodland owners and managers should use the information in the table for planning purposes. Those soils with the same ordination symbol can be grouped for similar management and potential productivity. What follows is an explanation of the column headings for table 7 to help with understanding and interpretation of the data.

The first part of the *ordination symbol*, a number, indicates the potential productivity of the soils for an indicator tree species. The number indicates the volume, in cubic meters per hectare per year, which the indicator species can produce in a pure stand under natural conditions (1 cubic meter per hectare equals 14.3 cubic feet per acre). The number 1 indicates low potential productivity; 2 or 3, moderate; 4 or 5, moderately high; 6 to 8, high; 9 to 11, very high; and 12 to 39, extremely high. The second part of the symbol, a letter, indicates the major kind of soil limitation. The letter *R* indicates steep slopes; *X*, stoniness or rockiness; *W*, excess water in or on the soil; *T*, toxic substances in the soil; *D*, restricted rooting depth; *C*, clay in the upper part of the soil; *S*, sandy texture; *F*, a high content of rock fragments in the soil; *L*, low strength; and *N*, snowpack. The letter *A* indicates that limitations or restrictions are insignificant. If a soil has more than one limitation, the priority is as follows: R, X, W, T, D, C, S, F, L, and N.

In the table, *slight, moderate,* and *severe* indicate the degree of the major soil limitations to be considered in management.

Erosion hazard is the probability that damage will occur as a result of site preparation and cutting where the soil is exposed along roads, skid trails, and fire lanes and in log-handling areas. Forests that have been burned or overgrazed are also subject to erosion. Ratings of the erosion hazard are based on the percent of the slope. A rating of *slight* indicates that no particular prevention measures are needed under ordinary conditions. A rating of *moderate* indicates that erosion-control measures are needed in certain silvicultural activities. A rating of *severe* indicates that special precautions are needed to control erosion in most silvicultural activities.

Equipment limitation reflects the characteristics and conditions of the soil that restrict use of the equipment generally needed in woodland management or harvesting. The chief characteristics and conditions considered in the ratings are slope, stones on the surface, rock outcrops, soil wetness, and texture of the surface layer. A rating of *slight* indicates that under normal conditions the kind of equipment and season of use are not significantly restricted by soil factors. Soil wetness can restrict equipment use, but the wet period does not exceed 1 month. A rating of *moderate* indicates that equipment use is moderately restricted because of one or more soil factors. If the soil is wet, the wetness restricts equipment use for a period of 1 to 3 months. A rating of *severe* indicates that equipment use is severely restricted either as to the kind of equipment that can be used or the season of use. If the soil is wet, the wetness restricts equipment use for more than 3 months.

Seedling mortality refers to the death of naturally occurring or planted tree seedlings, as influenced by the kinds of soil, soil wetness, or topographic conditions. The factors used in rating the soils for seedling mortality are texture of the surface layer, depth to a seasonal high water table and the length of the period when the water table is high, rock fragments in the surface layer, effective rooting depth, and slope aspect. A rating of *slight* indicates that seedling mortality is not likely to be a problem under normal conditions. Expected mortality is less than 25 percent. A rating of *moderate* indicates that some problems from seedling mortality can be expected. Extra precautions are advisable. Expected mortality is 25 to 50 percent. A rating of *severe* indicates that seedling mortality is a serious problem. Extra precautions are important. Replanting may be necessary. Expected mortality is more than 50 percent.

Windthrow hazard is the likelihood that trees will be uprooted by the wind because the soil is not deep enough for adequate root anchorage. The main restrictions that affect rooting are a seasonal high water table and the depth to bedrock, a fragipan, or

other limiting layers. A rating of *slight* indicates that under normal conditions no trees are blown down by the wind. Strong winds may damage trees, but they do not uproot them. A rating of *moderate* indicates that some trees can be blown down during periods when the soil is wet and winds are moderate or strong. A rating of *severe* indicates that many trees can be blown down during these periods.

The *potential productivity* of merchantable or *common trees* on a soil is expressed as a *site index* and as a *volume* number. The site index is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that woodland managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability.

The *volume*, a number, is the yield likely to be produced by the most important trees. This number, expressed as cubic feet per acre per year, indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

The first species listed under *common trees* for a soil is the indicator species for that soil. It generally is the most common species on the soil and is the one that determines the ordination class.

Trees to manage are those that are suitable for commercial wood production.

Recreation

The soils of the survey area are rated in table 8 according to limitations that affect their suitability for recreation. The ratings are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

In table 8, the degree of soil limitation is expressed as slight, moderate, or severe. *Slight* means that soil properties are generally favorable and that limitations are minor and easily overcome. *Moderate* means that limitations can be overcome or alleviated by planning, design, or special maintenance. *Severe* means that soil properties are unfavorable and that limitations can be offset only by costly soil reclamation, special design, intensive maintenance, limited use, or a combination of these.

The information in table 8 can be supplemented by other information in this survey, for example, interpretations for septic tank absorption fields in table 11 and interpretations for dwellings without basements and for local roads and streets in table 10.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The best soils have mild slopes and are not wet or subject to flooding during the period of use. The surface has few or no stones or boulders, absorbs rainfall readily but remains firm, and is not dusty when dry. Strong slopes and stones or boulders can greatly increase the cost of constructing campsites.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The best soils for picnic areas are firm when wet, are not dusty when dry, are not subject to flooding during the period of use, and do

not have slopes or stones or boulders that increase the cost of shaping sites or of building access roads and parking areas.

Playgrounds require soils that can withstand intensive foot traffic. The best soils are almost level and are not wet or subject to flooding during the season of use. The surface is free of stones and boulders, is firm after rains, and is not dusty when dry. If grading is needed, the depth of the soil over bedrock or a hardpan should be considered.

Paths and trails for hiking and horseback riding should require little or no cutting and filling. The best soils are not wet, are firm after rains, are not dusty when dry, and are not subject to flooding more than once a year during the period of use. They have moderate slopes and few or no stones or boulders on the surface.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. The best soils for use as golf fairways are firm when wet, are not dusty when dry, and are not subject to prolonged flooding during the period of use. They have moderate slopes and no stones or boulders on the surface. The suitability of the soil for tees or greens is not considered in rating the soils.

Wildlife Habitat

Prepared by Robert E. Myers, Biologist Emeritus, Natural Resources Conservation Service

Three different wildlife habitat zones occur in Clinton County resulting in many wildlife species. The zones are: 1) the narrow Lake Champlain Plain zone along the eastern edge of the county, 2) the Adirondack Mountain zone in the southwestern corner and along the western edge, and 3) the Adirondack Foothill zone which makes up the remainder of the county.

The Lake Plain habitat zone is extensively open cropland and hayland with only a few hedgerows and small woodlots breaking the landscape. Grain corn, silage corn, oats, hay and some winter wheat are grown in support of dairy farming. This land use pattern and variety of crops provide habitat for a low, but stable natural population of gray partridge, winter survival of some stocked ring-necked pheasants, and a fair population of wild turkey, cotton-tail rabbits, white-tailed deer, red fox, coyote, and songbirds. Migrating Canada geese and snow geese feed extensively in farm fields. Good populations of gray squirrels are common in and near woodlots.

The Adirondack Mountain zone is mainly forested with a good mixture of private forest lands scattered throughout the predominantly state-owned land. The mixture of older state forest, privately owned mixed-age forest where management and cutting are permitted, and forest re-growth on idle valley farms creates diverse habitat for forest wildlife species. In this area, there is a good population of deer. In spruce-fir habitat, the snowshoe hare population is good. Overall, the black bear population is very good while cotton-tail rabbit and songbird numbers are only poor to fair. The area also supports beaver, moose, fisher, bobcat, fox, coyote, eagles, and peregrine falcon among other species.

In the Adirondack Foothill wildlife habitat zone, large areas of corn silage, hayland and pasture support dairy farming. These farms are associated with large areas of forest including oak and maple. Areas of hedgerows, wetlands, and scattered idle fields of goldenrod, shrubs and other forms of early succession are included. Large areas of wetlands are in the northern part of this zone. Consequently, this diversity of land use supports an excellent population of gray squirrels and beaver, a very good population of bear, snowshoe hare and cotton-tail rabbits, and a good population of deer and turkey. Habitat is also provided for moose, fisher, coyote, fox, and a wide variety of songbird, marsh and shorebird species.

Soils affect the kind and amount of vegetation that is available to wildlife for food and cover. They also affect the construction of water impoundments. The kind and

abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created and improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 9, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of good indicates that the element or kind of habitat is easily established, improved, or maintained. Therefore, few or no limitations affect management for soils with a good rating, and satisfactory results can be expected. A rating of fair indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of poor indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved or maintained in most places, but management is difficult and must be intensive. A rating of very poor indicates that restrictions for the element or kind of habitat are very severe, and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flood hazard. Soil temperature and soil moisture are also considerations. Examples of grain and seed crops are corn, wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flood hazard, and slope. Soil temperature and soil moisture are also considerations. Examples of grasses and legumes are fescue, timothy, bromegrass, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flood hazard. Soil temperature and soil moisture are also considerations. Examples of wild herbaceous plants are bluestem, goldenrod, beggartick, quackgrass, and ragweed.

Hardwood trees and woody understory produce nuts and other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, birch, cherry, maple, apple, hawthorn, dogwood, hickory, blackberry, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated good are dogwood, autumn-olive, and crabapple.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, yew, cedar, and hemlock.

Wetland plants are annual and perennial, wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness,

reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, arrowhead, burreed, pickerelweed, cordgrass, rushes, sedges, and reeds.

Shallow water areas have an average depth of less than five feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, swamps, and ponds.

The habitat of various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include gray partridge, pheasant, meadow vole, meadowlark, field sparrow, cotton-tail rabbit, and red fox.

Habitat for woodland wildlife consists of areas of deciduous plants or coniferous plants or both, and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, ruffed grouse, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, and deer.

Habitat for wetland wildlife consists of open, marshy or swampy, shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, frogs, and tree swallows.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the estimated data and test data in the “Soil Properties” section.

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil within a depth of 5 or 6 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about grain-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 or 6 feet of the surface, soil wetness, depth to a seasonal high water table, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Table 10 shows the degree and kind of soil limitations that affect shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required. Special feasibility studies may be required where the soil limitations are severe.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for basements, graves, utility lines, open ditches, and other purposes. The ratings are based on soil properties, site features, and observed performance of the soils. The ease of digging, filling, and compacting is affected by the depth to bedrock, a cemented pan, or a very firm dense layer; stone content; soil texture; and slope. The time of the year that excavations can be made is affected by the depth to a seasonal high water table and the susceptibility of the soil to flooding. The resistance of the excavation walls or banks to sloughing or caving is affected by soil texture and depth to the water table.

Dwellings and *small commercial buildings* are structures built on shallow foundations on undisturbed soil. The load limit is the same as that for single-family dwellings no higher than three stories. Ratings are made for small commercial buildings without basements, for dwellings with basements, and for dwellings without basements. The ratings are based on soil properties, site features, and observed performance of the soils. A high water table, flooding, shrinking and swelling, and organic layers can cause the movement of footings. A high water table, depth to bedrock or to a cemented pan, large stones, slope, and flooding affect the ease of excavation and construction. Landscaping and grading that require cuts and fills of more than 5 or 6 feet are not considered. It is assumed that foundations are built to the depth of maximum frost penetration to avoid heaving.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or stabilized soil material; and a flexible or rigid surface. Cuts and fills are generally limited to less than 6 feet. The ratings are based on soil properties, site features, and observed performance of the soils. Depth to bedrock or to a cemented pan, a high water table, flooding, large stones, and slope affect the ease of excavating and grading. Soil strength (as inferred from the engineering classification

of the soil), shrink-swell potential, frost action potential, and depth to a high water table affect the traffic-supporting capacity.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. The ratings are based on soil properties, site features, and observed performance of the soils. Soil reaction, a high water table, depth to bedrock or to a cemented pan, the available water capacity in the upper 40 inches, and the content of salts, sodium, and sulfidic materials affect plant growth. Flooding, wetness, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer affect trafficability after vegetation is established.

Sanitary Facilities

Table 11 shows the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, and sanitary landfills. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required.

The table also shows the suitability of the soils for use as daily cover for landfill. A rating of *good* indicates that soil properties and site features are favorable for the use and good performance and low maintenance can be expected; *fair* indicates that soil properties and site features are moderately favorable for the use and one or more soil properties or site features make the soil less desirable than the soils rated good; and *poor* indicates that one or more soil properties or site features are unfavorable for the use and overcoming the unfavorable properties requires special design, extra maintenance, or costly alteration.

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 72 inches is evaluated. The ratings are based on soil properties, site features, and observed performance of the soils. Permeability, a high water table, depth to bedrock or to a cemented pan, and flooding affect absorption of the effluent. Large stones and bedrock or a cemented pan interfere with installation.

Unsatisfactory performance of septic tank absorption fields, including excessively slow absorption of effluent, surfacing of effluent, and hillside seepage, can affect public health. Ground water can be polluted if highly permeable sand and gravel or fractured bedrock is less than 4 feet below the base of the absorption field, if slope is excessive, or if the water table is near the surface. There must be unsaturated soil material beneath the absorption field to filter the effluent effectively. Many local ordinances require that this material be of a certain thickness.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Lagoons generally are designed to hold the sewage within a depth of 2 to 5 feet. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water.

The table gives ratings for the natural soil that makes up the lagoon floor. The surface layer and, generally, 1 or 2 feet of soil material below the surface layer are excavated to provide material for the embankments. The ratings are based on soil properties, site features, and observed performance of the soils. Considered in the ratings are slope, permeability, a high water table, depth to bedrock or to a cemented pan, flooding, large stones, and content of organic matter.

Excessive seepage resulting from rapid permeability in the soil or a water table that is high enough to raise the level of sewage in the lagoon causes a lagoon to function unsatisfactorily. Pollution results if seepage is excessive or if floodwater overtops the lagoon. A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor.

Sanitary landfills are areas where solid waste is disposed of by burying it in soil. There are two types of landfill—trench and area. In a trench landfill, the waste is placed in a trench. It is spread, compacted, and covered daily with a thin layer of soil excavated at the site. In an area landfill, the waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site.

Both types of landfill must be able to bear heavy vehicular traffic. Both types involve a risk of ground-water pollution. Ease of excavation and revegetation should be considered.

The ratings in the table are based on soil properties, site features, and observed performance of the soils. Permeability, depth to bedrock or to a cemented pan, a high water table, slope, and flooding affect both types of landfill. Texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium affect trench landfills. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, a limitation rated slight or moderate may not be valid. Onsite investigation is needed.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste.

Soil texture, wetness, coarse fragments, and slope affect the ease of removing and spreading the material during wet and dry periods. Loamy or silty soils that are free of large stones or excess gravel are the best cover for a landfill. Clayey soils are sticky or cloddy and are difficult to spread; sandy soils are subject to wind erosion.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. The surface layer generally has the best workability, more organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

Construction Materials

Table 12 gives information about the soils as a source of roadfill, sand, gravel, and topsoil. The soils are rated *good, fair,* or *poor* as a source of roadfill and topsoil. They are rated as a *probable* or *improbable* source of sand and gravel. The ratings are based on soil properties and site features that affect the removal of the soil and its use as construction material. Normal compaction, minor processing, and other standard construction practices are assumed. Each soil is evaluated to a depth of 5 or 6 feet.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the soil material below the surface layer to a depth of 5 or 6 feet. It is assumed that soil layers will be mixed during excavating and spreading. Many soils have layers of contrasting suitability within their profile. The table showing engineering index properties provides detailed information about each soil layer. This information can help to determine the suitability of each layer for use as roadfill. The

performance of soil after it is stabilized with lime or cement is not considered in the ratings.

The ratings are based on soil properties, site features, and observed performance of the soils. The thickness of suitable material is a major consideration. The ease of excavation is affected by large stones, a high water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the engineering classification of the soil) and shrink-swell potential.

Soils rated *good* contain significant amounts of sand or gravel or both. They have at least 5 feet of suitable material, a low shrink-swell potential, few cobbles and stones, and slopes of 15 percent or less. Depth to the water table is more than 3 feet. Soils rated *fair* are more than 35 percent silt- and clay-sized particles and have a plasticity index of less than 10. They have a moderate shrink-swell potential, slopes of 15 to 25 percent, or many stones. Depth to the water table is 1 to 3 feet. Soils rated *poor* have a plasticity index of more than 10, a high shrink-swell potential, many stones, or slopes of more than 25 percent. They are wet and have a water table at a depth of less than 1 foot. They may have layers of suitable material, but the material is less than 3 feet thick.

Sand and *gravel* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 12, only the probability of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material.

The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the engineering classification of the soil), the thickness of suitable material, and the content of rock fragments. Kinds of rock, acidity, and stratification are given in the soil series descriptions. Gradation of grain sizes is given in the table on engineering index properties.

A soil rated as a probable source has a layer of clean sand or gravel or a layer of sand or gravel that is up to 12 percent silty fines. This material must be at least 3 feet thick and less than 50 percent, by weight, large stones. All other soils are rated as an improbable source. Coarse fragments of soft bedrock, such as shale and siltstone, are not considered to be sand and gravel.

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area.

Plant growth is affected by toxic material and by such properties as soil reaction, available water capacity, and fertility. The ease of excavating, loading, and spreading is affected by rock fragments, slope, a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, a water table, rock fragments, bedrock, and toxic material.

Soils rated *good* have friable, loamy material to a depth of at least 40 inches. They are free of stones and cobbles, have little or no gravel, and have slopes of less than 8 percent. They are low in content of soluble salts, are naturally fertile or respond well to fertilizer, and are not so wet that excavation is difficult.

Soils rated *fair* are sandy soils, loamy soils that have a relatively high content of clay, soils that have only 20 to 40 inches of suitable material, soils that have an appreciable amount of gravel, stones, or soluble salts, or soils that have slopes of 8 to 15 percent. The soils are not so wet that excavation is difficult.

Soils rated *poor* are very sandy or clayey, have less than 20 inches of suitable material, have a large amount of gravel, stones, or soluble salts, have slopes of more than 15 percent, or have a seasonal high water table at or near the surface.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

Table 13 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and are easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increase in construction costs, and possibly increased maintenance are required.

This table also gives for each soil the restrictive features that affect drainage, irrigation, terraces and diversions, and grassed waterways.

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock, to a cemented pan, or to other layers that affect the rate of water movement; permeability; depth to a high water table or depth of standing water if the soil is subject to ponding; slope; susceptibility to flooding; subsidence of organic layers; and the potential for frost action. Excavating and grading and the stability of ditchbanks are affected by depth to bedrock or to a cemented pan, large stones, slope, and the hazard of cutbanks caving. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, and sulfur. Availability of drainage outlets is not considered in the ratings.

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is

affected by large stones and depth to bedrock or to a cemented pan. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock or to a cemented pan affect the construction of terraces and diversions. A restricted rooting depth, a severe hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Grassed waterways are natural or constructed channels, generally broad and shallow, that conduct surface water to outlets at a nonerosive velocity. Large stones, wetness, slope, and depth to bedrock or to a cemented pan affect the construction of grassed waterways. A hazard of wind erosion, low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey. The data and the estimates of soil and water features, listed in tables, are explained on the following pages.

Soil properties are determined by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine grain-size distribution, plasticity, and compaction characteristics. These results are reported in table 14.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties shown in the tables include the range of grain-size distribution and Atterberg limits, the engineering classification, and the physical and chemical properties of the major layers of each soil. Pertinent soil and water features also are given.

Engineering Index Properties

Table 14 gives estimates of the engineering classification and of the range of index properties for the major layers of each soil in the survey area. Most soils have layers of contrasting properties within the upper 5 or 6 feet.

Depth to the upper and lower boundaries of each layer is indicated. The range in depth and information on other properties of each layer are given for each soil series under the heading “Soil Series and Their Morphology.”

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. “Loam,” for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is as much as about 15 percent, an appropriate modifier is added, for example, “gravelly.” Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 1993) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 1986).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil

that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest. The AASHTO classification for soils tested, with group index numbers in parentheses, is given in table 14.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of grain-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is omitted in the table.

Physical Properties

Table 15 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In table 15, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$- or $^1/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root

penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability (K_{sat}) refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity (K_{sat}). The estimates in the table indicate the rate of water movement, in inches per hour, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 15, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in table 15 as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of several factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are as follows:

1. Coarse sands, sands, fine sands, and very fine sands.
2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.
3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.

4L. Calcareous loams, silt loams, clay loams, and silty clay loams.

4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.
5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.
6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.
7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.
8. Soils that are not subject to wind erosion because of coarse fragments on the surface or because of surface wetness.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Chemical Properties

Table 16 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Water Features

Table 17 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils

are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. Table 17 indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. Table 17 indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more

than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Soil Features

Table 18 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Engineering Index Test Data

Table 19 shows laboratory test data for several pedons sampled at carefully selected sites in the survey area. The pedons are representative of the series described in the section “Soil Series and Their Morphology.” The soil samples were tested by the New York State Department of Transportation, Bureau of Soil Mechanics.

The testing methods generally are those of the American Association of State Highway and Transportation Officials (AASHTO) or the American Society for Testing and Materials (ASTM).

The tests and methods are AASHTO classification—M 145 (AASHTO), D 3282 (ASTM); Unified classification—D 2487 (ASTM); Mechanical analysis—T 88 (AASHTO), D 422 (ASTM), D 2217 (ASTM); Liquid limit—T 89 (AASHTO), D 4318 (ASTM); Plasticity index—T 90 (AASHTO), D 4318 (ASTM); Moisture density—T 99 (AASHTO), D 698 (ASTM); Specific gravity—T 100 (AASHTO), D 854 (ASTM); California bearing ratio—T 193 (AASHTO), D 1883 (ASTM); and Shrinkage—T 92 (AASHTO), D 427 (ASTM).

Engineering Properties of Geologic Deposits

This section was prepared by the staff of the Soil Mechanics Bureau of the New York State Department of Transportation.

The following geologic deposits occur in Clinton County: glacial till, ice-contact deposits, outwash, deltaic, beach ridge, lacustrine, marine, alluvial and organic. The engineering significance of each geologic deposit is influenced to a great extent by its mode of deposition which, in turn, determines the texture of the material and the internal structure of the landform. Other influences are the position of the deposit in the landscape and position of the water table. In Clinton County the geologic deposits are divided into the following categories: deep till deposits; shallow-to-rock deposits; stratified coarse-grained deposits; stratified fine-grained deposits; organic deposits.

Deep till deposits are unstratified, highly variable mixtures of all particle sizes ranging from rock fragments to clay. This material was scoured and transported from nearby sources by glacial ice and deposited as ground moraine, and lateral or recessional moraine. Bedrock is usually greater than five feet beneath the soil surface; but, in some small areas, this depth may be less or a few rock outcrops may occur. The individual rock and mineral fragments in the soil generally reflect the types of bedrock in the vicinity.

Soils formed in glacial till deposits are those of the Adirondack, Amenia, Appleton, Becket, Bice, Bombay, Fernlake, Grenville, Hermon, Hogansburg, Kalurah, Lyonmounten, Madrid, Malone, Massena, Monadnock, Mundalite, Peasleeville, Runeberg, Sabattis, Schroon, Skerry, Success, Sunapee, Tughill, and Worden series. The Cook, Coveytown, Fahey, Northway, and Occur series have a veneer of coarse-grained material over deep glacial till.

Most of glacial till soils have been subjected to the compactive weight of overriding continental ice sheet. Deep till and residual soils are on slopes ranging from nearly level to very steep. Many landscapes are such that cut and fill earthwork is involved in most construction. The soils usually provide stable, relatively incompressible foundations for engineering works. Fill material from these deposits, when properly compacted, generally provide stable embankments. Steep cut slopes often are subject to surface sloughing and soil erosion. The Sabattis series typically has thin a organic surface over till. The Cook, Lyonmounten, Runeberg, Sabattis and Tughill series are subject to surface saturation or ponding.

Shallow-to-rock deposits are usually from 0.5 to 4 feet thick with common rock outcrops. The landforms and topography are generally controlled by bedrock. Soils formed in shallow-to-rock deposits are those of the Benson, Chazy, Churubusco,

Conic, Gardenisle, Glebe, Hogback, Irona, Lyman, Neckrock, Ogdensburg, Rawsonville, Ricker, Sheddenbrook, Skylight, Summerville, Topknot and Tunbridge series. Most of these series have till over the rock. The Churubusco and Ricker series have organic deposits over rock.

The primary engineering concerns relate to the underlying bedrock and groundwater conditions. The overlying material has engineering characteristics as described in other sections. It is limited in quantity as a source of fill material because of its thickness over bedrock.

Stratified coarse-grained deposits can be divided into two general categories; gravel and sand sorted by glacial melt water into layered or stratified deposits, and coarser materials deposited by fluvial action. They occupy such geologic landforms as outwash plains and terraces, beach ridges and the coarse-grained portions of deltas, lacustrine plains, alluvial fans and floodplains. The strata within these deposits may be well sorted or poorly sorted, and consist of particle sizes ranging from cobbles to silt. The deposits are usually loose, porous, and have moderately rapid to rapid permeability.

Soils formed in the stratified coarse-grained deposits are those of the Adams, Champlain, Colosse, Colton, Covert, Croghan, Deerfield, Gougeville, Grattan, Junius, Lovewell, Mooers, Naumburg, Pipestone, Plainfield, Sciota, Searsport, Trout River, Waddington, and Wallace.

Coarse-grained deposits generally have relatively high strength and low compressibility, but are subject to settlement when vibrated. Because of their loose and porous nature, most of these deposits are not highly erodible. The Lovewell series has fine-grain material over coarse material. The Gougeville and Searsport series are subject to saturation at the surface or ponding. Also, the Lovewell series is subject to occasional flooding.

These deposits of gravel and sand have many uses as a construction material. Depending on gradation, soundless, and plasticity, they may be used for such purposes as:

1. Fill material for highway embankments.
2. Fill material for parking areas and developments.
3. Fill material to distribute stress on underlying soils so construction operations may progress.
4. Sub-base for pavements.
5. Wearing surfaces for driveways, parking lots, and some roads.
6. Material for highway shoulders.
7. Free draining backfill for structures and pipes.
8. Outside shells of dams for impounding water.
9. Slope protection blankets to drain and help stabilize wet cut slopes.
10. Sources of sand and gravel for general use.

Stratified fine-grained deposits consist of mainly lacustrine fine-grained sediment transported by glacial melt waters and deposited in quiet proglacial lakes and ponds, or consist of marine sediments of the Champlain Sea.

Soils formed in stratified fine-grain deposits are those of the Adjidaumo, Cornish, Flackville, Hailesboro, Heuvelton, Kingsbury, Medomak, Mino. Muskellunge, Nicholville, Pinconning, Rhinebeck, Roundabout, Rumney, Shaker, and Swanton series. Soils formed in deep marine or lacustrine silt and clay deposits are those of the Adjidaumo, Hailesboro, Heuvelton, Kingsbury, Muskellunge, and Rhinebeck series. The Shaker and Swanton soils formed in a veneer of moderately coarse-grained material over fine-grained sediments. The Mino, Nicholville, and Roundabout series formed in deep silt or very fine sand areas of lake plains. The Cornish, Medomak, and Rumney series are flood plain deposits.

Due to their fine-texture and high moisture content, these deposits have low strengths, are compressible, and may settle for long periods of time under a superimposed loading. The soils with a higher fine sand and silt content have low compressibility, and are highly erodible and frost susceptible. The Cornish and Rumney series are subject to occasional flooding for brief periods. Medomak series are subject to frequent flooding for long periods.

The fine-grained deposits are difficult to use for engineering works, especially in areas that are flat, wet, and subject to ponding. Sites for embankments and heavy structures or buildings on all soils formed in these finer sediments must be investigated for strength and settlement characteristics, and the effects of groundwater.

Organic deposits for the most part are accumulations of plant remains. In places, they include a minimal amount of mineral soil. Typically, they occur in very poorly drained depressions or bogs which are covered with water during most of the year.

Soils formed in the organic deposits are those of the Beseman, Borosaprists, Bucksport, Churubusco, Loxley, Markey, Saprists and Wonsqueak series. The soils in organic deposits are unsuitable for foundations for engineering works because they are wet, low strength, and highly compressible.

Generally, the organic material should be removed down to the depth of suitable underlying material and replaced with suitable backfill. Filling over organic deposits causes long-term settlement. The Markey series is organic over coarse-grained material. Beseman and Wonsqueak series are organic over fine-grained material. The Churubusco series has organic deposits less than 4.2 feet thick over bedrock.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (USDA, 1992 and 1999). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 21 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Alfisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udalf (*Ud*, meaning humid, plus *alf*, from Alfisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Glossudalfs (*Gloss*, meaning tonguing of albic material into the argillic horizon, plus *udalf*, the suborder of the Alfisols that has a udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Oxyaquic* identifies the subgroup that is saturated with water within 40 inches of the surface for one month or more. An example is Oxyaquic Glossudalfs.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle size, mineral content, soil temperature regime, soil depth, and reaction. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is coarse-loamy, mixed, mesic Oxyaquic Glossudalfs.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each

series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the “Soil Survey Manual” (USDA, 1993). Many of the technical terms used in the descriptions are defined in “Soil Taxonomy” (USDA, 1999) and in “Keys to Soil Taxonomy” (USDA, 1998). Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

Adams Series

The Adams series consists of very deep, somewhat excessively drained and excessively drained soils on outwash plains, terraces, and deltas. These soils formed in glacial outwash sands. Slopes range from 0 to 70 percent.

Adams soils are associated in a drainage sequence with the moderately well drained Croghan soils, the somewhat poorly drained Wainola soils, and the poorly drained Deinache soils. The Adams soils are commonly adjacent to Monadnock, Becket, Colton and Tunbridge soils on the landscape. Adams soils have less silt and clay than the more loamy Monadnock and Becket soils. Adams soils have less rock fragments throughout the profile than Colton soils. Also, Adams soils are deeper to bedrock than the moderately deep Tunbridge soils.

Typical pedon of Adams loamy sand, 8 to 15 percent slopes, in the town of Saranac, 0.7 miles west of the intersection of Picketts Corners Road and Nashville Road and 0.15 miles south of the Nashville Road, in a sand pit; USGS Dannemora topographic quadrangle, lat. 44 degrees 41 minutes 48 seconds N. and long. 73 degrees 44 minutes 21 seconds W., NAD 1927:

Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) loamy sand; numerous light brownish gray (10YR 6/2) sand grains in matrix; weak medium and fine granular structure; very friable; few coarse, common fine, and many very fine roots; 1 percent rock fragments; very strongly acid; abrupt smooth boundary.

E—7 to 9 inches; pinkish gray (7.5YR 6/2) sand; single grain; loose; common very fine roots; 1 percent rock fragments; strongly acid; abrupt wavy boundary.

Bhs—9 to 11 inches; dark reddish brown (5YR 3/3) loamy sand; weak fine granular structure; very friable except 30 percent firm nodules 1/2 inch in diameter; few very fine roots; 1 percent rock fragments; strongly acid; abrupt wavy boundary.

Bs1—11 to 13 inches; dark brown (7.5YR 3/4) loamy sand; weak medium subangular blocky structure parting to weak fine granular; very friable; few very fine roots; 1 percent rock fragments; strongly acid; clear wavy boundary.

Bs2—13 to 18 inches; strong brown (7.5YR 5/6) sand; weak medium and coarse subangular blocky structure; very friable; few very fine roots; 1 percent rock fragments; strongly acid; clear wavy boundary.

BC—18 to 27 inches; strong brown (10YR 5/6) sand; weak medium and coarse subangular blocky structure; very friable; few very fine roots; 2 percent rock fragments; moderately acid; clear smooth boundary.

C1—27 to 35 inches; yellowish brown (10YR 5/4) fine sand; massive with weak medium plate-like divisions; friable; few very fine roots; 2 percent rock fragments; moderately acid; clear smooth boundary.

C2—35 to 72 inches; brown (10YR 5/3) sand; occasional lenses 1 to 2 mm. thick of grayish brown (10YR 5/2), strong brown (7.5YR 5/6), and brown (7.5YR 5/4) sand throughout matrix; single grain (except massive with weak thin and medium plate-like divisions in about 5 percent of horizon); loose (except friable in massive areas); 5 percent rock fragments; moderately acid.

The thickness of the solum ranges from 16 to 30 inches. Depth to bedrock is greater than 72 inches. Adams soils are typically free of rock fragments, but range

from 0 to 5 percent gravel above 20 inches and from 0 to 20 percent gravel below 20 inches.

The O horizon, if present, is neutral or has hue of 5YR to 10YR, value of 2 or 3 and chroma of 0 or 1.

The Ap or A horizon has hue of 5YR to 10YR, value of 3 to 5 and chroma of 1 to 4. Texture is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction is extremely acid to strongly acid.

The E horizon has hue of 5YR to 10YR, value of 5 to 7, and chroma of 1 to 3. Texture is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction is very strongly acid or strongly acid.

The Bhs has hue of 5YR to 10YR, value 2 or 3 and chroma of 1 to 4. Texture is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid. Some pedons have a Bh horizon.

The Bs horizons have hue of 5YR or 7.5YR, value of 3 to 6, and 3 to 8. Texture is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid.

The BC horizon has hue of 7.5YR to 2.5Y, value of 4 to 6 and chroma of 2 to 6. Texture ranges from fine sand to coarse sand in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid.

The C horizon has hue of 10YR to 5Y, value of 4 to 7, and chroma of 2 to 6. Texture ranges from fine sand to coarse sand in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

Adirondack Series

The Adirondack series consists of very deep, somewhat poorly drained soils. These soils formed in loamy glacial till uplands. These soils are shallow or moderately deep to a dense basal till substratum. Slopes range from 0 to 8 percent.

The Adirondack soils are in a drainage sequence with the well drained Becket soils, the moderately well drained Skerry soils, and the very poorly drained Sabattis soils. Adirondack soils are on landscapes near the Monadnock, Sunapee, Tunbridge, and Lyman soils. Adirondack soils have a dense substratum which is not present in Monadnock soils and Sunapee soils. Adirondack soils are deeper to bedrock than the moderately deep Tunbridge soils and the shallow Lyman soils.

Typical pedon of Adirondack loam, 3 to 8 percent slope, in the Town of Clinton, about 2,700 feet south of the intersection of U.S. Route 11 and Gagnier Road, and 20 feet west of woods line in a pasture; USGS Churubusco topographic quadrangle, lat. 44 degrees 54 minutes 8 seconds N. and long. 73 degrees 55 minutes 6 seconds W., NAD 1927:

Ap—0 to 5 inches, dark brown (7.5YR 3/2) loam; weak fine and very fine subangular blocky structure parting to weak fine and very fine granular; very friable; many very fine and fine roots; 7 percent rock fragments; strongly acid; clear smooth boundary.

Bs1—5 to 12 inches, brown (7.5YR 4/4) loam; weak fine and medium subangular blocky structure; friable; many very fine and common fine roots; many fine and very fine, and common medium pores; few fine and medium brown (10YR 5/3) areas of iron depletion and few fine faint strong brown (7.5YR 4/6) soft masses of iron oxides; 10 percent rock fragments; strongly acid; clear wavy boundary.

Bs2—12 to 18 inches, brown (7.5YR 4/3) fine sandy loam; weak fine and medium subangular blocky structure parting to very weak medium and thin platy; friable; common very fine roots; many very fine and common fine pores; few fine prominent light brownish gray (10YR 6/2) areas of iron depletion, common medium faint strong brown (7.5YR 4/6) and common fine and medium distinct

brown (10YR 5/3) soft masses of iron oxides; 13 percent rock fragments; strongly acid; clear wavy boundary.

BC—18 to 22 inches, light brownish gray (2.5Y 6/2) gravelly fine sandy loam; weak thick and medium platy structure; friable (firm in place); common very fine roots; few fine and medium pores; common coarse and medium prominent yellowish brown (10YR 5/6) and few medium distinct dark yellowish brown (10YR 4/4) soft masses of iron oxides; 17 percent rock fragments; strongly acid; clear irregular boundary.

Cd1—22 to 36 inches, brown (10YR 4/3) gravelly fine sandy loam; massive; common very coarse dessication cracks (with grayish brown 10YR 5/2 faces); firm; few fine and medium pores; few fine distinct dark yellowish brown (10YR 4/6) and yellowish brown (10YR 5/6) soft masses of iron oxides, and few fine and medium faint brown (10YR 5/3) masses of iron oxides; 30 percent rock fragments (including 5 percent cobbles); strongly acid; gradual wavy boundary.

Cd2—36 to 72 inches, brown (10YR 4/3) gravelly fine sandy loam; massive; few very coarse dessication cracks; firm; few fine and medium pores; common fine and medium faint dark yellowish brown (10YR 4/4) soft masses of iron oxides, and few fine distinct grayish brown (10YR 5/2) areas of iron depletion; 30 percent rock fragments (including 10 percent cobbles); moderately acid.

The thickness of the solum ranges from 15 to 30 inches. Redoximorphic features occur in the spodic horizon within 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments, mainly stones, cobbles and gravel, range from 5 to 35 percent, by volume, throughout the soil.

The O horizon, absent in some pedons, ranges from fibric material to sapric material. Reaction is extremely acid or very strongly acid.

The Ap or A horizon is neutral or has hue of 5YR to 10YR, value of 1 to 3, and chroma of 0 to 3. Texture is sandy loam, fine sandy loam, very fine sandy loam, loam, or silt loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The E horizon, where present, has hue of 5YR to 10YR, value of 5 to 7 and chroma of 1 or 2. Texture is loamy fine sand, sandy loam, fine sandy loam, loam or silt loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The Bh horizon, where present, has hue of 5YR or 7.5YR, value of 2 or 3 and chroma of 1 or 2. Texture is sandy loam, fine sandy loam, loam or silt loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The Bhs horizon, where present, has hue of 5YR or 7.5YR, and value and chroma of 3. Texture and reaction are similar to the Bh horizon.

The Bs horizon has hue of 5YR or 7.5YR, value of 3 to 5 and chroma of 3 or 4. It is sandy loam, fine sandy loam, loam or silt loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The BC horizon has hue of 7.5YR to 2.5Y, value of 3 to 6 and chroma of 1 to 4. Texture is loamy fine sand to silt loam in the fine earth fraction. Reaction is very strongly acid to moderately acid.

The Cd horizon has hue of 10YR or 2.5Y, value of 4 or 5 and chroma of 1 to 3. It is loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam in the fine earth fraction. Reaction is strongly acid or moderately acid.

Adjidaumo Series

The Adjidaumo series consists of very deep, poorly drained and very poorly drained soils on glacial lake plains. These soils formed in water deposited clay and silt in a lake or marine environment. Slopes range from 0 to 3 percent.

The Adjidaumo soils are in a drainage sequence with the moderately well drained Heuvelton soils and the somewhat poorly drained Muskellunge soils. The Adjidaumo

soils are commonly adjacent to Hailesboro, Roundabout, Swanton, Kalurah, Hogansburg, and Malone soils. Adjidaumo soils have a higher clay content throughout the profile than the Hailesboro and Roundabout soils. Adjidaumo soils lack the loamy mantle over clay that is characteristic of Swanton soils (fig. 21). The clayey Adjidaumo soils generally lack the rock fragments commonly present in loamy Kalurah, Hogansburg and Malone soils.

Typical pedon of Adjidaumo silty clay, in the Town of Beekmantown, 0.9 mile northeast of the intersection of Cemetery Road with Lake Shore Road, and about 0.5 mile north of Cemetery Road in a hayfield; USGS Beekmantown topographic quadrangle, lat. 44 degrees 48 minutes 15 seconds N., and long. 73 degrees 23 minutes 1 second W., NAD 1927:

Figure 21.—A profile of Adjidaumo silty clay with a gray subsoil and many redoximorphic features.

Ap—0 to 7 inches, black (10YR 2/1) silty clay; strong medium granular structure; very friable; common very fine and fine roots; slightly acid; abrupt smooth boundary.

Bg1—7 to 10 inches, dark gray (10YR 4/1) silty clay; moderate fine angular blocky structure; friable; few very fine roots; common fine distinct dark yellowish brown (10YR 4/4) masses of iron oxides mainly on faces of peds; neutral; clear smooth boundary.

Bg2—10 to 36 inches, dark gray (10YR 4/1) silty clay; moderate medium angular structure; friable; common medium distinct dark yellowish brown (10YR 4/4) masses of iron oxides mainly on faces of peds; slightly alkaline; gradual smooth boundary.

Cg—36 to 72 inches, grayish brown (10YR 5/2) silty clay; massive; friable; common medium faint yellowish brown (10YR 5/4) masses of iron oxides, and common medium faint gray (10YR 5/1) areas of iron depletion; slightly alkaline, very slightly effervescent.

The thickness of the solum ranges from 24 to 48 inches. Depth to carbonates ranges from 24 to 60 inches. Depth to bedrock is more than 60 inches. Rock fragments range from 0 to 2 percent by volume in the surface and subsoil, and from 0 to 10 percent in the substratum.

The Ap horizon has hue of 10YR, value of 2 or 3, and chroma of 0 to 2. It is silty

clay, silty clay loam, or silt loam in the fine earth fraction. Reaction is slightly acid or neutral.

The B horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 0 to 2. It is silty clay, silty clay loam, or clay in the fine earth fraction. Reaction is neutral or slightly alkaline.

The C horizon has hue of 10YR, 2.5Y, or is neutral, value of 3 to 5, and chroma of 0 to 3. It is silty clay loam, silty clay or clay in the fine earth fraction. Reaction is moderately alkaline or slightly alkaline.

Amenia Series

The Amenia series consists of very deep, moderately well drained soils on Champlain Valley lowlands. These soils formed in loamy, calcareous glacial till derived mainly from limestone. Slope ranges from 0 to 8 percent.

The Amenia soils are in a drainage sequence with somewhat poorly drained Massena soils. Amenia soils are commonly adjacent to moderately well drained Fahey and somewhat poorly drained Rhinebeck soils. Amenia soils have less rock fragments and sand than Fahey soils. Amenia soils have less clay than Rhinebeck soils.

Typical pedon of Amenia fine sandy loam, 3 to 8 percent slopes, in the town of Peru, 200 feet east of the Old Military Turnpike and 300 feet north of Brand Hollow Road, in a field; USGS Peru topographic quadrangle, lat. 44 degrees 36 minutes 22 seconds N., and long. 73 degrees 30 minutes 48 seconds W., NAD 1927:

Ap—0 to 9 inches; dark brown (10YR 3/3) fine sandy loam; weak medium subangular blocky structure parting to weak medium granular; very friable; common medium, fine, and very fine roots; few medium, common fine and very fine pores; 5 percent gravels; slightly acid; abrupt smooth boundary.

Bw1—9 to 16 inches; brown (7.5YR 4/4) fine sandy loam; weak medium and fine subangular blocky structure; friable; common fine and very fine roots; common fine and very fine pores; 5 percent gravels; slightly acid; clear smooth boundary.

Bw2—16 to 23 inches; brown (10YR 4/3) fine sandy loam; weak medium and fine subangular blocky structure; friable; few fine and common very fine roots; common fine and very fine pores; 10 percent gravels; neutral; abrupt wavy boundary.

BC—23 to 28 inches; dark grayish brown (10YR 4/2) gravelly fine sandy loam; moderate medium subangular blocky structure; friable; few very fine roots; common fine and very fine pores; common fine faint olive brown (2.5Y 4/4) masses of iron oxides; 25 percent rock fragments (including 10 percent cobbles); neutral; clear smooth boundary.

C—28 to 36 inches; dark grayish brown (2.5Y 4/2) loam; massive; friable; few fine and very fine pores; common medium distinct dark grayish brown (10YR 4/2) and few fine distinct dark gray (10YR 4/1) areas of iron depletion, and common fine faint olive brown (2.5Y 4/4) masses of iron oxides; 10 percent gravels; slightly alkaline, slightly effervescent; clear smooth boundary.

Cd—36 to 72 inches; grayish brown (2.5Y 5/2) loam; moderate thick and medium platy structure; firm; few fine and very fine pores; common medium distinct yellowish brown (10YR 5/4) masses of iron oxides and common fine distinct dark grayish brown (10YR 4/2) areas of iron depletion mainly on faces of peds; 5 percent gravels; moderately alkaline; strongly effervescent.

The thickness of the solum ranges from 18 to 34 inches. Depth to carbonates ranges from 10 to 34 inches. Redoximorphic features occur within 30 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments range from 5 to 15 percent by volume in the surface layer, and 5 to 35 percent in the subsoil and substratum.

The Ap horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 or 3. Texture is silt loam, loam, or fine sandy loam in the fine earth fraction. Reaction ranges from moderately acid to slightly alkaline. Undisturbed pedons have an A horizon 4 to 7 inches thick, with hue of 10YR, value of 2 or 3, and chroma of 2.

The B horizons have hue of 5YR to 2.5Y, value of 4 or 5, and chroma of 2 to 6. Texture is fine sandy loam, loam, or silt loam in the fine earth fraction. Reaction ranges from moderately acid to slightly alkaline.

The BC horizon has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 2 to 6. Texture is fine sandy loam, loam or silt loam in the fine earth fraction. Reaction ranges from moderately acid to slightly alkaline.

The C horizon has hue of 7.5YR to 2.5Y, value of 4 or 5, and chroma of 2 or 3. Texture is loam or fine sandy loam in the fine earth fraction. Reaction is slightly alkaline or moderately alkaline.

Appleton Series

The Appleton series consists of very deep, somewhat poorly drained soils on Champlain Valley lowlands. These soils formed in calcareous, medium textured glacial till sediments derived from limestone and sandstone. Slopes range from 0 to 8 percent.

Appleton soils are associated in a drainage sequence with well drained Madrid soils and moderately well drained Bombay soils. They are commonly adjacent to somewhat poorly drained Hailesboro and Rhinebeck soils and very poorly drained Runeberg soils on the landscape. Appleton soils have more rock fragments than the Hailesboro and Rhinebeck soils. The Appleton soils have an argillic horizon and are not as gray as the Runeberg soils.

Typical pedon of Appleton loam, 0 to 3 percent slopes, in the Town of Peru, 60 feet south of the Davern Road at a point 280 feet east of the intersection of Jarvis Road and the Davern Road in a hayfield; USGS Peru topographic quadrangle, lat. 44 degrees 33 minutes 5 seconds N., and long. 73 degrees 31 minutes 54 seconds W., NAD 1927:

Ap—0 to 10 inches; dark grayish brown (10YR 4/2) loam, moderate medium granular structure; very friable; many fine and very fine roots; 5 percent rock fragments; neutral; abrupt smooth boundary.

E—10 to 11 inches; brown (10YR 5/3) fine sandy loam; massive; very friable; few very fine roots; common medium distinct yellowish brown (10YR 5/6) masses of iron oxides; 5 percent rock fragments; neutral; abrupt irregular boundary.

BE—11 to 18 inches; yellowish brown (10YR 5/6) fine sandy loam; moderate medium subangular blocky structure; friable; few very fine roots; common medium faint yellowish brown (10YR 5/4), and common medium distinct grayish brown (10YR 5/2) areas of iron and clay depletion; 5 percent rock fragments; neutral; abrupt smooth boundary.

Bt—18 to 30 inches; dark grayish brown (10YR 4/2) silt loam; strong medium subangular blocky structure; friable; few very fine roots; common thin and moderately thick clay films on faces of peds and in pores; many fine distinct yellowish brown(10YR 5/6) soft masses of iron oxides (45 percent) and common medium faint grayish brown (10YR 5/2) areas of iron depletion; 5 percent rock fragments; neutral, slightly effervescent at 26 inches; clear smooth boundary.

Cd—30 to 72 inches; grayish brown (10YR 5/2) loam; massive; firm; common coarse faint brown (10YR 5/3) masses of iron oxides; 10 percent rock fragments; slightly alkaline, strongly effervescent.

The thickness of solum ranges from 20 to 36 inches. Depth to carbonates ranges from 18 to 32 inches. Redoximorphic features occur within 20 inches of the mineral

soil surface. Depth to bedrock is greater than 60 inches. Rock fragments range from 5 to 30 percent by volume and generally increase with depth.

The A or Ap horizon have hue of 10YR, value of 3 or 4, and chroma of 2. Texture is loam, silt loam or fine sandy loam in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The E horizon, where present, has hue of 7.5YR or 10YR, value of 3 to 6, and chroma of 2 to 4. Texture is fine sandy loam, very fine sandy loam, loam or silt loam in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The BE horizon has hue of 7.5YR or 10YR, value of 3 to 6, and chroma of 2 to 6. Texture is fine sandy loam, very fine sandy loam, loam or silt loam in the fine earth fraction. Reaction ranges from moderately acid to slightly alkaline.

The Bt horizon has hue of 5YR to 2.5Y, value of 3 to 5, and chroma of 2 or 3. Texture is loam, light sandy clay loam or silt loam in the fine earth fraction with clay content ranging from 18 to 27 percent. Reaction ranges from moderately acid to slightly alkaline.

The Cd horizon has hue of 5YR to 2.5Y, value of 3 to 5, and chroma of 2 to 4. Texture is fine sandy loam, loam or silt loam in the fine earth fraction. Reaction is slightly or moderately alkaline.

Aquents

Aquents consist of very deep, very poorly drained soils formed in deposits of marine and lacustrine sediments, glacial outwash, or glacial till. They have shallow water on the surface for much of the year. These soils are on low-lying positions of landscapes or on depressions adjacent to bodies of water. Slope is less than one percent.

Aquents in Clinton County are mapped in association with Saprists which are formed in a mantle of well decomposed organic material. Aquents are commonly near Bucksport, Adjidaumo, Runeberg, Lyonmounten and Sabattis soils on the landscape. Saprists and Aquents are ponded with water most of the year compared to these associated soils which are either ponded for less time or not ponded at all.

Aquents are highly variable; therefore, a typical pedon is not provided. Aquents have mineral layers that generally are high in organic matter content. The depth to bedrock generally is more than 60 inches. Rock fragments range from 0 to 50 percent in the solum, and from 0 to 65 percent in the substratum.

The surface layer is typically 2 to 15 inches thick. It can be either a thin, organic layer or a mineral soil, or combination of the two. It has hue of 10YR to 5Y (or it is neutral), value of 2 to 4, and chroma of 0 to 2. Texture ranges from loamy sand to silty clay in the fine earth fraction. Reaction is very strongly acid to neutral.

The substratum has hue of 10YR to 5Y (or it is neutral), value of 3 to 6, and chroma of 2 or less. Texture ranges from sand to silty clay in the fine earth fraction. Reaction is very strongly acid to moderately alkaline.

Becket Series

The Becket series consists of very deep, well drained soils on upland glacial till hillsides. These soils formed in loamy deposits with a dense substratum layer. Slope ranges from 3 to 35 percent.

The Becket soils are in a drainage sequence with moderately well drained Skerry soils, and somewhat poorly drained Adirondack soils. Becket soils occur on the landscape near the Monadnock, Sunapee, Sabattis and Tunbridge soils. The Becket soils have a dense substratum which is lacking in well drained Monadnock soils and moderately well drained Sunapee soils. Becket soils lack the organic surface layer, gray matrix, and other redoximorphic features that occur in Sabattis soils. Becket soils are very deep to bedrock whereas Tunbridge soils are moderately deep.

Typical pedon of Becket fine sandy loam, strongly sloping, very bouldery, in the Town of Saranac, about 1,200 feet south of the intersection of Standish Road and True Brook Road, on a east side roadbank; USGS Alder Brook topographic quadrangle, lat. 44 degrees 37 minutes 18 seconds N. and long. 73 degrees 54 minutes 31 seconds W., NAD 1927:

A—0 to 3 inches, very dark gray (10YR 3/1) fine sandy loam; weak fine subangular blocky structure; very friable; common coarse, medium, fine and very fine roots; common medium, fine and very fine pores; 5 percent rock fragments; very strongly acid; clear wavy boundary.

E—3 to 4 inches, grayish brown (10YR 5/2) fine sandy loam; weak fine subangular blocky structure; very friable; common coarse, medium, fine and very fine roots; common fine and very fine pores; 5 percent rock fragments; very strongly acid; abrupt wavy boundary.

Bhs—4 to 9 inches, dark reddish brown (5YR 3/3) sandy loam; weak medium and fine subangular blocky structure; friable; common medium, fine and very fine roots; common fine and very fine pores; 7 percent rock fragments; very strongly acid; clear wavy boundary.

Bs—9 to 16 inches, reddish brown (5YR 4/4) sandy loam; moderate medium and fine subangular blocky structure; firm; common fine and very fine, and few medium roots; common fine and very fine pores; 10 percent rock fragments (including 5 percent cobbles); strongly acid; clear wavy boundary.

BC—16 to 23 inches, dark yellowish brown (10YR 4/4) sandy loam; moderate medium and fine subangular blocky structure; firm; few fine and very fine roots; common fine and very fine pores; 10 percent rock fragments (including 5 percent cobbles); strongly acid; abrupt wavy boundary.

Cd1—23 to 33 inches, dark yellowish brown (10YR 4/4) gravelly fine sandy loam; moderate thick and very thick platy structure with yellowish brown (10YR 5/4) loamy fine sand lenses between plates; firm; few fine and very fine pores; 20 percent rock fragments (including 5 percent cobbles); strongly acid; clear wavy boundary.

Cd2—33 to 72 inches, dark yellowish brown (10YR 4/4) cobbly fine sandy loam; moderate medium platy structure with yellowish brown (10YR 5/4) loamy fine sand (40 percent) between plates; firm; few fine and very fine pores; 20 percent rock fragments (including 10 percent gravel); very strongly acid.

The thickness of the solum ranges from 18 to 36 inches. Depth to bedrock is greater than 60 inches. Rock fragments range from 5 to 30 percent by volume in the surface and subsoil, and from 5 to 40 percent in the substratum.

The O horizon, if present, has hue of 5YR to 10YR (or it is neutral), value of 2 to 4, and chroma of 0 to 4. It is moderately or slightly decomposed. Reaction ranges from extremely acid to slightly acid.

The A horizon, if present, has hue 5YR to 10YR, value of 2 to 4, and chroma of 1 to 3. It is fine sandy loam, sandy loam or loam in the fine earth fraction. Reaction ranges from extremely acid to slightly acid.

The E horizon has hue of 5YR to 2.5Y, value of 4 to 7, and chroma of 1 or 2. It is fine sandy loam, sandy loam or loamy sand in the fine earth fraction. Reaction ranges from extremely acid to slightly acid.

The Bhs horizon, if present, has hue of 2.5YR to 7.5YR, value of 2 to 4, and chroma of 1 to 3. It is fine sandy loam, sandy loam or loam in the fine earth fraction. Reaction ranges from extremely acid to slightly acid.

The Bs horizon has hue of 2.5YR to 7.5YR, value of 3 to 6, and chroma of 3 to 6. It is fine sandy loam or sandy loam in the fine earth fraction. Reaction ranges from extremely acid to slightly acid.

The BC horizon has hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 3 to 6. It is

fine sandy loam, sandy loam, loamy fine sand or loamy sand in the fine earth fraction. Reaction ranges from extremely acid to slightly acid.

The Cd horizon has hue of 10YR to 5Y, value of 4 to 7, and chroma of 2 to 6. The loamy structural plates are fine sandy loam or sandy loam in the fine earth fraction with loamy fine sand or loamy sand material between plates. Reaction ranges from very strongly acid to neutral.

Benson Series

The Benson series consists of shallow, somewhat excessively drained soils on limestone or calcareous shale bedrock-controlled landscape. These soils formed in loamy and channery glacial till. Slope ranges from 0 to 70 percent.

The Benson soils are near the Gardenisle, Amenia, Massena, Northway, Kingsbury and Rhinebeck soils on the landscape. Benson soils are formed in thinner deposits of glacial till compared to the moderately deep Gardenisle soils and very deep Amenia, Massena, Northway, Kingsbury and Rhinebeck soils. In addition, Benson soils lack the sandy surface and subsoil of Northway soils. Benson soils have less clay than Kingsbury and Rhinebeck soils.

Typical pedon of Benson loam, in a Gardenisle-Benson complex, strongly sloping, rocky, in the Town of Beekmantown, about 1,500 feet east of intersection with Lake Shore Road, and 1,000 feet south of Point Au Roche Road in a brushy field; USGS Beekmantown topographic quadrangle, lat. 44 degrees 46 minutes 54 seconds N. and long. 73 degrees 23 minutes 16 seconds W., NAD 1927:

A—0 to 6 inches, dark brown (10YR 3/3) loam; weak fine granular structure; friable; many very fine roots; 5 percent rock fragments; slightly alkaline; clear smooth boundary.

Bw1—6 to 11 inches, brown (10YR 4/3) channery silty clay loam; moderate fine and very fine subangular blocky structure; friable; many very fine roots; 15 percent rock fragments; slightly alkaline, slightly effervescent; clear smooth boundary.

Bw2—11 to 14 inches, mixed dark yellowish brown (10YR 4/4) (60 percent) and brown (10YR 4/3) very channery silty clay loam; weak medium subangular blocky structure; friable; common very fine roots; 50 percent rock fragments; slightly alkaline, strongly effervescent; clear irregular boundary.

C—14 to 18 inches, dark gray (10YR 4/1) and brown (10YR 4/3) extremely channery silty clay loam from weathered shale; massive; firm; 65 to 70 percent rock fragments; strongly effervescent; abrupt irregular boundary.

R—18 inches, dark gray (10YR 4/1) calcareous shale bedrock.

The thickness of the solum ranges from 9 to 20 inches. The depth to bedrock ranges from 10 to 20 inches. Rock fragments make up 35 to 70 percent by volume of the particle size control section and range from 5 to 50 percent in the surface and from 35 to 70 percent below.

The A horizon has hue of 7.5YR or 10YR, value of 2 to 4, and chroma of 2 to 4. It is silt loam, loam, or silty clay loam in the fine earth fraction. Reaction ranges from moderately acid to slightly alkaline.

The Bw horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 2 to 6. It is silt loam, loam or silty clay loam in the fine earth fraction. Reaction ranges from slightly acid to slightly alkaline in the upper part of the Bw horizon, and is neutral or slightly alkaline in the lower part of the Bw horizon.

The C horizon, if present, has hue of 5YR to 5Y, value of 3 to 5, and chroma of 3 to 6. It is silt loam, loam or silty clay loam in the fine earth fraction. Reaction is neutral or slightly alkaline.

Beseman Series

The Beseman series are very deep, very poorly drained soils formed in organic material overlying a loamy substratum. These soils are in depressions of glacial till uplands and in slack water areas of fluvial and outwash plains. Slopes range from 0 to 1 percent.

The Beseman soils are on landscapes near the Loxley, Sabattis, Searsport, Monadnock, Skerry, Adirondack and Fluvaquents soils. Beseman soils have thiner organic deposits than Loxley soils. However, Beseman soils have thicker organic layers than Sabattis soils. Beseman soils do not have as much sand as Searsport soils. The thick, dark brown organic layers in Beseman soils are very thin or absent in Monadnock, Skerry and Adirondack soils. Beseman soils do not display an irregular decrease in organic carbon with depth as is characteristic of Fluvaquents soils.

Typical pedon of Beseman mucky peat, in the Town of Black Brook, about 1.4 miles west of intersection of Union Falls Road with Silver Lake Road, and about 180 feet south of road in a bog; USGS Alder Brook topographic quadrangle, long. 44 degrees 30 minutes 50 seconds N. and long. 73 degrees 53 minutes 23 seconds W., NAD 1927:

Oi—0 to 2 inches, dark yellowish brown (10YR 3/4) fibric material; 85 percent unrubbed fiber, 70 percent rubbed fiber; massive; very friable; many fine and common medium roots; extremely acid; gradual smooth boundary.

Oe—2 to 10 inches, dark yellowish brown (10YR 4/4) hemic material; 50 percent unrubbed fiber, 40 percent rubbed fiber; massive; very friable; many fine and common medium roots; extremely acid; abrupt smooth boundary.

Oa1—10 to 35 inches, dark reddish brown (5YR 2.5/2) broken face sapric material; 10 percent unrubbed fiber, 5 percent rubbed fiber; weak medium subangular blocky structure; very friable; few fine and medium roots; extremely acid; diffuse smooth boundary.

Oa2—35 to 45 inches, black (5YR 2.5/1) sapric material; 10 percent unrubbed fiber, 5 percent rubbed fiber; massive; very friable; extremely acid; abrupt smooth boundary.

2Cg—45 to 72 inches, gray (10YR 5/1) fine sandy loam; massive; friable; strongly acid; abrupt smooth boundary.

The thickness of organic soil material and the depth to the mineral substratum range from 16 to 51 inches. Depth to bedrock is greater than 60 inches. The content of woody fragments ranges from 0 to 10 percent. Greater amounts of woody fragments are only in the upper part of the control section.

The surface tier has hue of 5YR to 10YR (or it is neutral), value of 2 or 3, and chroma of 1 to 3. It consists of fibric, hemic or sapric material. Typically, the fiber is of herbaceous origin. Reaction is extremely acid.

The subsurface and bottom layers have hue of 5YR to 10YR (or it is neutral), value of 2 or 3, and chroma of 1 to 3. They are mainly sapric material. Reaction is generally extremely acid, but may range to very strongly acid.

The 2Cg horizon has hue of 5YR to 5Y, value of 4 to 6 and chroma of 0 or 1. It is sandy loam, fine sandy loam, or loam in the fine earth fraction. Reaction ranges from extremely acid to neutral.

Bice Series

The Bice series consists of very deep, well drained soils on ridges and sideslopes of upland glacial till plains. These soils formed in loamy ablation till deposits. Slopes range from 3 to 35 percent.

The Bice soils are in a drainage sequence with moderately well drained Schroon

soils, somewhat poorly drained Peasleeville soils and poorly drained Lyonmounten soils. Bice soils are also near the Sunapee, Adirondack, Irona, Topknot, Conic, Chazy and Sabattis soils on the landscape. Bice soils generally lack redoximorphic features in the solum which are present in Schroon and Adirondack soils. The Bice soils also lack the dense substratum characteristic of Adirondack soils. Bice soils are very deep to bedrock in contrast to shallow Irona and Topknot soils, and moderately deep Conic and Chazy soils. The Bice soils do not have the moderately thick organic surface layer or gray matrix characteristic of very poorly drained Sabattis soils.

Typical pedon of Bice fine sandy loam, 3 to 8 percent slopes, in the Town of Saranac, about 0.8 mile north of the Buck Corners Road intersection with Ryan Road, and 200 feet west of Ryan Road in a potato field; USGS Dannemora topographic quadrangle, lat. 44 degrees 41 minutes 53 seconds N. and long. 73 degrees 43 minutes 10 seconds W., NAD 1927:

Ap—0 to 11 inches, dark brown (10YR 3/3) fine sandy loam; pale brown (10YR 6/3) dry; weak coarse and medium subangular blocky structure parting to weak medium and fine granular; very friable; many very fine and few fine roots; 7 percent rock fragments; very strongly acid; abrupt smooth boundary.

Bw1—11 to 16 inches, strong brown (7.5YR 5/6) fine sandy loam; weak medium subangular blocky structure; friable; common very fine roots; common fine and very fine pores; 10 percent rock fragments; moderately acid; clear smooth boundary.

Bw2—16 to 26 inches; yellowish brown (10YR 5/6) gravelly fine sandy loam; weak medium and fine subangular blocky structure; friable; few very fine roots; common fine and very fine pores; 20 percent rock fragments (including 5 percent cobbles); moderately acid; clear wavy boundary.

C1—26 to 43 inches; yellowish brown (10YR 5/4) gravelly fine sandy loam; massive; friable; common very fine pores; 25 percent rock fragments (including 5 percent cobbles); strongly acid; gradual smooth boundary.

C2—43 to 72 inches, brown (10YR 5/3) gravelly fine sandy loam; few coarse faint light brownish gray (10YR 6/2) and common fine and medium distinct yellowish brown (10YR 5/6) discolorations; massive; friable; common very fine pores; 15 percent rock fragments (including 5 percent cobbles); strongly acid.

The thickness of the solum ranges from 20 to 36 inches. Depth to bedrock is greater than 60 inches. Rock fragments range from 5 to 25 percent by volume throughout the soil.

The Ap horizon, if present, has hue of 7.5YR or 10YR, value of 3 or 4 and chroma of 2 to 4. The A horizon has hue of 7.5YR or 10YR, value of 2 or 3 and chroma of 1 or 2. Texture ranges from fine sandy loam to silt loam in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid.

The Bw horizon has hue of 7.5YR or 10YR, value of 4 to 6 and chroma of 4 to 6. Texture ranges from coarse sandy loam to silt loam in the fine earth fraction. Reaction is very strongly acid to moderately acid.

The BC horizon, if present, has hue of 10YR or 2.5Y value of 4 to 6 and chroma of 3 to 6. Texture ranges from sandy loam to loam in the fine earth fraction. Reaction is strongly acid to moderately acid.

The C horizon has hue of 10YR or 2.5Y, value of 4 to 6 and chroma of 2 to 4. Texture is sandy loam, fine sandy loam or loam in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid.

Bombay Series

The Bombay series consists of very deep, moderately well drained soils on glacial till lowlands. These soils formed in loamy glacial till derived mainly from sandstone and dolostone materials. Slopes range from 0 to 8 percent.

The Bombay soils are in a drainage sequence with the well drained Madrid soils, and the somewhat poorly drained Appleton soils. The Bombay soils are also near the Grattan, Plainfield, Covert, Pipestone, Northway, and mesic inclusions of Runeberg soils. Bombay soils are not as sandy as the Grattan, Plainfield, Covert, and Pipestone soils. Bombay soils do not have a thick sandy mantle as the somewhat poorly drained Northway soils. The Bombay soils lack the gray matrix colors of mesic soils similar to Runeberg.

Typical pedon of Bombay loam, 3 to 8 percent slopes, in the Town of Peru, 500 feet north of Brand Hollow Road at a point about 2,500 feet west of intersection of Route 22B and Brand Hollow Road in a field; USGS Peru topographic quadrangle, lat. 44 degrees 36 minutes 6 seconds N. and long. 73 degrees 33 minutes 14 seconds W., NAD 1927:

Ap—0 to 9 inches, dark brown (10YR 3/3) loam; pale brown (10YR 6/3) dry; moderate fine and medium granular structure; very friable; many fine, and few medium and coarse roots; 5 percent rock fragments; slightly acid; abrupt smooth boundary.

BE—9 to 16 inches, brown (10YR 4/3) very fine sandy loam; moderate medium and coarse granular structure; very friable; common fine roots; 5 percent rock fragments; neutral; clear wavy boundary.

E/B—16 to 23 inches, pale brown (10YR 6/3 -E) fine sandy loam; weak medium platy structure parting to moderate fine subangular blocky; friable; few fine and medium roots; common very fine pores, and few fine and coarse pores; numerous skeletans on ped faces, few faint clay films lining ped interior pores; 10 percent dark brown (10YR 4/3) remnant B horizon material; few fine and medium faint yellowish brown (10YR 5/6) masses of iron oxides; 10 percent rock fragments; neutral; clear wavy boundary.

B/E—23 to 26 inches, brown (10YR 4/3) fine sandy loam; moderate medium platy structure; friable; few fine roots; common fine pores; many distinct clay films lining pores in ped interiors; pale brown (10YR 6/3 ped exteriors 1 to 2 mm thick (10 percent E material); common medium distinct pale brown (10YR 6/3) masses of iron oxides; 10 percent rock fragments; neutral; clear wavy boundary.

Bt—26 to 34 inches, dark brown (7.5YR 3/4) gravelly loam; moderate nedium and fine subangular blocky structure; firm; few fine roots; many very fine pores, common fine pores, and few medium and coarse pores; common distinct clay films on ped faces and lining pores; few fine distinct yellowish brown (10YR 5/6) and many fine distinct light yellowish brown (10YR 6/4) masses of iron oxides; 15 percent rock fragments; neutral; clear smooth boundary.

BC—34 to 56 inches, brown (10YR 4/3) gravelly loam; strong thick platy structure; firm; few fine roots; common fine pores; many coarse distinct yellowish brown (10YR 5/4) masses of iron oxides; 15 percent rock fragments; neutral; clear smooth boundary.

C—56 to 72 inches, brown (10YR 5/3) gravelly fine sandy loam; massive with weak thick plate-like divisions; firm; common very fine pores, few fine pores, and many coarse pores; few fine distinct strong brown (7.5YR 5/6) masses of iron oxides; 20 percent rock fragments; strongly effervescent, moderately alkaline.

The thickness of the solum ranges from 30 to 60 inches. The depth to carbonates is 30 to 70 inches. Redoximorphic features occur within 30 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments range from 5 to 30 percent by volume in the surface and subsoil, and from 15 to 35 percent in the substratum.

The Ap horizon has hue of 7.5YR to 2.5Y, value of 3 or 4 and chroma of 2 or 3. It is silt loam, loam or fine sandy loam in the fine earth fraction. Reaction ranges from strongly acid to slightly acid.

The BE horizon has hue of 7.5YR to 2.5Y, value of 3 to 5 and chroma of 2 to 4. It is

silt loam, loam, very fine sandy loam, or fine sandy loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The E/B and B/E horizons have hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 2 to 4 in the E part, and hue of 5YR or 10YR, value of 3 to 5 and chroma of 3 or 4 in the B part. It is silt loam, loam or fine sandy loam in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The Bt horizon has hue of 5YR or 10YR, value of 3 to 5 and chroma of 3 or 4. Redoximorphic features are few to many. It is silt loam, loam or fine sandy loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The BC horizon has hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 or 4. It is silt loam, loam or fine sandy loam in the fine earth fraction. Reaction ranges from moderately acid to slightly alkaline.

The C horizons have hue of 5YR to 2.5Y, value of 3 to 5, and chroma of 2 to 4. It is loam or fine sandy loam in the fine earth fraction. Reaction ranges from slightly acid to moderately alkaline.

Borosaprists

Borosaprists consist of very deep, very poorly drained soils on basin-like areas of outwash plains and glacial till uplands. These soils formed in undecomposed to well decomposed plant material. These soils are ponded with shallow water throughout most of the year. They are on low-lying landscape positions and on depressions adjacent to bodies of water. Some areas of this soil unit were created by beaver dams blocking drainageways. Slopes range from 0 to 2 percent.

Borosaprists in Clinton County are mapped in association with Searsport and Naumburg soils which are formed in mineral soil deposits. Borosaprists commonly are near Adirondack, Sabattis, Colton and Adams soils on the landscape. Borosaprists are ponded with water longer during the year compared with these nearby soils. Also, Borosaprists have thicker organic deposits than these associated soils.

Borosaprists are highly variable; therefore, a typical pedon is not provided. Borosaprists consist of organic material more than 16 inches thick over mineral soil deposits, or thicker than 51 inches. Bedrock is deeper than 60 inches. Rock fragments are generally absent in the organic part, and range from 0 to 45 percent in underlying mineral substrata.

The organic soil layers have hue of 10YR to 5Y (or are neutral), value of 1 to 3, and chroma of 0 to 2. It is dominantly sapric material, but individual layers contain variable amounts of hemic and fibric material. Reaction ranges from extremely acid to slightly acid.

The underlying mineral substratum, when present, has hue of 10YR to 5Y, value of 3 to 5, and chroma of 0 to 2. Texture ranges from sand to silty clay in the fine earth fraction. Reaction ranges from strongly acid to neutral.

Bucksport Series

The Bucksport series consists of very deep, very poorly drained soils on ground moraines, outwash plains, lake plains and glacial till plains. These soils formed in organic deposits greater than 51 inches thick. Slopes range from 0 to 1 percent.

The Bucksport soils are commonly adjacent to Wonsqueak, Runeberg, Cook, Sunapee, Schroon and Malone soils on the landscape. Bucksport soils have organic deposits greater than 51 inches thick whereas Wonsqueak soils have thinner organic mantles. Bucksport soils have thicker organic deposits than very poorly drained Runeberg and Cook soils which are dominantly mineral soils. The Bucksport soils also contrast with Sunapee, Schroon and Malone soils which are dominantly mineral.

Typical pedon of Bucksport mucky peat, in the Town of Clinton, about 2.3 miles

west of intersection Clinton Mills Road with Bull Run Road and 50 feet south of Clinton Mills Road; USGS Ellenburg Depot topographic quadrangle, lat. 44 degrees 57 minutes 34 seconds N. and long. 73 degrees 52 minutes 17 seconds W., NAD 1927:

Oe—0 to 7 inches, dark reddish brown (5YR 2.5/2) hemic material; 50 percent unrubbed fiber and 35 percent rubbed fiber; weak medium and fine granular structure; nonsticky, nonplastic; common medium, fine and very fine roots; strongly acid (5.2 in 0.01M CaCl2); clear smooth boundary.

Oa1—7 to 31 inches, dark reddish brown (5YR 3/2) sapric material; 40 percent unrubbed fiber and 10 percent rubbed fiber; weak medium and fine subangular blocky structure; nonsticky, nonplastic; few fine and very fine roots; very strongly acid (5.0 in 0.01M CaCl2); clear smooth boundary.

Oa2—31 to 47 inches, black (5YR 2.5/1) sapric material; 30 percent unrubbed fiber and 5 percent rubbed fiber; weak medium subangular blocky structure; nonsticky, nonplastic; extremely acid (4.1 in 0.01M CaCl2); gradual smooth boundary.

Oa3—47 to 72 inches; black (5YR 2.5/1) sapric material; 10 percent unrubbed fiber and 5 percent rubbed fiber; massive; nonsticky, nonplastic; very strongly acid (4.8 in 0.01M CaCl2).

The thickness of the organic material is greater than 51 inches and ranges to over 12 feet. Depth to bedrock is greater than 60 inches. The content of woody fragments range from 0 to 20 percent throughout the soil.

The surface layer has hue of 2.5YR to 10YR (or it is neutral), value of 2 to 4, and chroma of 0 to 2. The surface layer is typically sapric material; but in some pedons, it is hemic or fibric material with or without sapric materials. Reaction ranges from extremely acid to strongly acid in 0,01M calcium chloride.

The subsurface layer has hue of 2.5YR to 10YR, value of 2 to 4, and chroma of 1 to 3. It is typically sapric material but some pedons have thin layers of fibric material or hemic material. Reaction ranges from extremely acid to moderately acid in 0.01M calcium chloride.

The bottom layer has hue of 2.5YR to 10YR, value of 2 to 4, and chroma of 1 to 3. It is typically sapric material but some pedons have thin layers of fibric material or hemic material. Reaction ranges from very strongly acid to slightly acid in 0.01M calcium chloride.

Champlain Series

The Champlain Series consists of very deep, well and somewhat excessively drained soils on outwash plains, deltas, and terraces. These soils formed in sandy deposits. Slopes range from 0 to 70 percent.

Champlain soils are in a drainage sequence with moderately well drained Mooers soils, somewhat poorly drained Sciota soils and poorly drained Deinache soils. Champlain soils occur in landscapes near the Adams, Colton, Monadnock, Bombay, Nicholville and Coveytown soil. Champlain soils lack the reddish brown spodic horizon characteristic of Adams and Colton soils. Champlain soils have more sand in the subsoil and less rock fragments than Monadnock and Bombay soils. The Champlain soils have less silt and very fine sand than the Nicholville soils. Champlain soils do not have either redoximorphic features or loamy substrata as in Coveytown soils.

Typical pedon of Champlain fine sand, 0 to 3 percent slopes, in the Town of Ausable, one mile east of Buck Hill Road intersection with Palmer Hill Road, and 110 feet south of Palmer Hill Road in woodland; USGS Ausable Forks topographic quadrangle, lat. 44 degrees 27 minutes 51 seconds N. and long. 73 degrees 37 minutes 19 seconds W., NAD 1927:

Oe—0 to 2 inches, moss underlain by moderately decomposed needles, moss and roots.

A—2 to 10 inches, very dark grayish brown (10YR 3/2) fine sand; very weak medium subangular blocky structure parting to weak fine granular; very friable; many medium, fine and very fine roots; moderately acid; clear smooth boundary.

Bw1—10 to 21 inches, yellowish brown (10YR 5/6) fine sand; very weak medium and course subangular blocky structure; very friable; common fine and very fine roots; slightly acid; clear smooth boundary.

Bw2—21 to 33 inches, brownish yellow (10YR 6/6) fine sand; common fine faint brown (10YR 5/3) skeletans; very weak medium and course subangular blocky structure; very friable; few fine and very fine roots; slightly acid; abrupt smooth boundary.

C1—33 to 55 inches, mixed yellowish brown and (10YR 5/4) and pale brown (10YR 6/3) sand; single grain; loose; 10 percent rock fragments; slightly acid; clear smooth boundary.

C2—55 to 72 inches, pale brown (10YR 6/3) sand; single grain; loose; neutral; clear smooth boundary.

The thickness of the solum ranges from 15 to 36 inches. Depth to bedrock is more than 60 inches. Rock fragments, mainly gravel, range from 0 to 10 percent by volume throughout the soil.

The O horizon is present in some pedons. It can be hemic or fibric. Reaction ranges from extremely acid to strongly acid.

The A or Ap horizon has a hue of 7.5YR or 10YR, value of 2 to 4, and chroma of 1 to 3. Texture is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction ranges from strongly acid to slightly acid.

The Bw horizon has hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8. Texture is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction ranges from strongly acid to slightly acid.

The BC horizon, if present, has hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 2 to 6. Texture is loamy fine sand, loamy sand, fine sand, or sand in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The C horizon has hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 to 6. Texture is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction ranges from moderately acid to neutral.

Chazy Series

The Chazy series consists of moderately deep, somewhat poorly drained soils on footslopes and other low areas of bedrock-controlled uplands. These soils formed in loamy glacial till material. Slope ranges from 0 to 8 percent.

The Chazy soils are in a drainage sequence with the well drained Conic soils. Chazy soils are also near the Topknot, Irona, Peasleeville, Schroon and Sunapee soils on the landscape. Chazy soils were formed in a slighty thicker soil mantle than the shallow Topknot soils. Chazy soils have redoximorphic features which are absent in well drained Irona soils. The Chazy soils are formed on bedrock controlled landscapes near the very deep Peasleeville, Schroon and Sunapee soils.

Typical pedon of Chazy loam, within a map unit of Topknot-Chazy complex, gently sloping, rocky, in the Town of Ellenburg, about 400 feet north of intersection of Bohen Road and NY Route 190, and 120 feet east of Bohen Road in a pasture, USGS Churubusco topographic quadrangle, lat. 44 degrees 52 minutes 33 seconds N. and long. 73 degrees 57 minutes 43 seconds W., NAD 1927:

Ap—0 to 10 inches; very dark grayish brown (10YR 3/2) loam, pale brown (10YR 6/3) dry; weak medium subangular blocky structure parting to weak medium and fine granular; very friable; many very fine roots; many fine and very fine pores; 10 percent rock fragments; slightly acid; abrupt smooth boundary.

Bw—10 to 16 inches; brown (10YR 4/3) fine sandy loam, weak medium subangular

blocky structure; friable; common very fine roots; many fine and very fine pores; common fine and medium distinct grayish brown (10YR 5/2) areas of iron depletion on faces of pedss and few fine and medium faint dark yellowish brown (10YR 4/4) masses of iron oxides; 10 percent rock fragments; slightly acid; clear smooth boundary.

Bg—16 to 28 inches; grayish brown (10YR 5/2) fine sandy loam; weak medium subangular blocky structure; friable; few very fine roots; common fine and very fine pores; few fine faint yellowish brown (10YR 5/4, and common medium and coarse distinct yellowish brown (10YR 5/6) masses of iron oxides; 14 percent rock fragments; neutral; abrupt smooth boundary.

2R—28 inches; massive light gray (10YR 7/2) sandstone bedrock.

The thickness of the solum ranges from 21 to 40 inches. Redoximorphic features occur within 16 inches of the mineral soil surface. Depth to bedrock is 20 to 40 inches. Rock fragments, dominantly sandstone and granite, range from 5 to 35 percent by volume throughout.

The Ap horizons have hue of 10YR, value of 2 or 3, and chroma of 1 to 3. Unplowed A horizons have value of 2 or 3, and chroma of 1 or 2. Texture is fine sandy loam or loam in the fine earth fraction. Unless the soil is limed, reaction ranges from strongly acid to slightly acid.

The BE horizon, if present, has hue of 7.5YR to 2.5Y, value of 4 to 6 and chroma of 2 to 4. Texture is fine sandy loam or loam in the fine earth fraction. Reaction ranges from strongly acid to slightly acid.

The Bw horizons have hue of 7.5YR to 2.5Y, value of 4 to 6 and chroma of 2 to 4. Texture is fine sandy loam or loam in the fine earth fraction. Reaction ranges from strongly acid to slightly acid.

The Bg horizon has hue of 10YR or 2.5Y, value of 4 to 6 and chroma of 0 to 2. Texture is fine sandy loam or loam in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The BC horizon, if present, has hue of 10YR or 2.5Y, value of 3 to 6 and chroma of 2 or 3. Texture is sandy loam, fine sandy loam or loam in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The C horizon, if present, has hue of 10YR or 2.5Y, value of 4 to 6 and chroma of 2 to 4. Texture is sandy loam, fine sandy loam or loam in the fine earth fraction. Reaction ranges from moderately acid to neutral.

Churubusco Series

The Churubusco series are very poorly drained soils that formed in organic material overlying sandstone bedrock. They are nearly level soils in depressions on bedrock controlled till plains. Depth to bedrock is 16 to 50 inches. Slope ranges from 0 to 2 percent.

The Churubusco soils are on landscapes near the Ricker, Irona, Topknot, and Wonsqueak soils. Churubusco soils have a seasonal high water table which is not present in Ricker soils. Churubusco soils formed in organic deposits, unlike the Irona soils and Topknot soils which formed in mineral deposits. Churubusco soils are shallower to bedrock than the very deep Wonsqueak soils.

Typical pedon of Churubusco muck, in the Town of Mooers, 0.7 mile west on Rock Road from Cannon Corners Road, then 500 feet west and south on trail, then 500 feet west into woods; USGS Ellenburg Depot topographic quadrangle, lat. 44 degrees 58 minutes 47 seconds N. and long. 73 degrees 45 minutes 47 seconds W., NAD 1927:

Oe—0 to 2 inches, dark reddish brown (5YR 2.5/2) hemic material; 75 percent unrubbed fiber, 25 percent rubbed fiber; massive; very friable; extremely acid (pH 3.2 in $CaCl_2$); gradual wavy boundary.

Oa1—2 to 11 inches, very dark gray (5YR 3/1) sapric material; 40 percent unrubbed fiber, 10 percent rubbed fiber; weak fine granular structure; very friable; extremely acid (pH 3.3 in CaCl2); gradual wavy boundary.

Oa2—11 to 32 inches, black (5YR 2.5/1) sapric material; 20 percent unrubbed fiber, 5 percent rubbed fiber; massive; very friable; extremely acid (pH 3.4 in CaCl2); abrupt smooth boundary..

2R—32 inches, light gray (10YR 7/2) sandstone bedrock.

The thickness of the solum and depth to bedrock range from 16 to 50 inches. Woody fragments (up to 2 inches in diameter) are at random throughout the control section and comprise up to 10 percent of the volume in some pedons.

The surface layer has hue of 5YR to 10YR, value of 2 or 3 and chroma of 0 to 2 (or it is neutral). This layer consists of hemic and/or sapric material with primarily herbaceous fibers. Reaction in 0.01M CaC12 is extremely acid.

The subsurface and bottom layers have hue of 5YR to 10YR, value of 2 or 3, and chroma of 0 to 2. These layers are dominantly sapric material with thin layers of hemic material in some pedons. Reaction in 0.01M CaC12 is extremely acid.

Some pedons have a thin 2C horizon above the bedrock. It has hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 2 to 4. Texture is fine sandy loam, sandy loam, or loamy sand in the fine earth fraction. Reaction is very strongly acid to slightly acid.

Colosse Series

The Colosse series consists of very deep, excessively drained and somewhat excessively drained soils on glacial lake beach ridges and outwash plains. These soils formed in very cobbly loamy material over very cobbly sands. Slopes range from 3 to 25 percent.

The Colosse soils are in a complex with Trout River soils. Colosse soils are also near Fahey, Coveytown, Cook and Wainola soils on the landscape. The Colosse soils lack redoximorphic features in the subsoil which are present in moderately well drained Fahey soils. Colosse soils do not have a loamy substratum as in the somewhat poorly drained Coveytown and very poorly drained Cook soils. Colosse soils have more rock fragments and lack redoximorphic features in comparison to Wainola soils.

Typical pedon of Colosse very cobbly fine sandy loam, in a Colosse-Trout River complex, strongly sloping, very stony unit, in the Town of Altona, about 4,400 feet east of the junction of Alder Bend Road and the Irona-Altona Road, and approximately 1,200 feet south of the Irona-Altona Road in a gravel pit at the edge of a wooded area; USGS Altona topographic quadrangle, lat. 44 degrees 53 minutes 50 seconds N. and long. 73 degrees 41 minutes 20 seconds W., NAD 1927:

Oe—0 to 2 inches, black (10YR 2/1) unrubbed fibers (75percent) from leaves, roots and twigs; weak fine granular structure; very friable; few medium, and many fine and very fine roots; 25 percent rock fragments; strongly acid; clear wavy boundary.

E—2 to 6 inches, pinkish gray (7.5YR 6/2) very cobbly fine sandy loam; weak fine subangular blocky structure parting to weak fine and very fine granular; very friable; few medium, and many fine and very fine roots; 35 percent percent rock fragments; very strongly acid; clear wavy boundary.

Bs1—6 to 13 inches, brown (7.5YR 4/4 and 3/4) very cobbly fine sandy loam; weak fine and medium subangular blocky structure; very friable; moderately smeary; few coarse and medium, and many fine and very fine roots; 35 percent rock fragments; strongly acid; gradual wavy boundary.

Bs2—13 to 23 inches, strong brown (7.5YR 5/6 and 4/6) very cobbly fine sandy loam; weak fine and medium subangular blocky structure; very friable; slightly smeary;

few coarse and medium, and many fine and very fine roots; 55 percent rock fragments; strongly acid; gradual wavy boundary.

BC—23 to 30 inches, yellowish brown (10YR 5/4) and dark yellowish brown (10YR 4/4) very cobbly fine sandy loam; massive; very friable; 55 percent rock fragments; few coarse and medium, and many fine roots; strongly acid; gradual wavy boundary.

2C1—30 to 37 inches, yellowish brown (10YR 5/4) and dark yellowish brown (10YR 4/4) extremely cobbly loamy sand; single grain; loose; few fine and medium roots; 60 percent rock fragments; strongly acid; gradual wavy boundary.

2C2—37 to 72 inches, brown (10YR 4/3), dark grayish brown (10YR 4/2) and pale brown (10YR 6/3) extremely cobbly sand; single grain; loose; few fine roots in upper part; 70 percent rock fragments; moderately acid.

The thickness of the solum ranges from 24 to 38 inches. Depth to bedrock is greater than 60 inches. Rock fragments range from 15 to 60 percent by volume in the surface and subsoil, and from 35 to 70 percent in the substratum.

The Oe horizon has hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 1 or 2. It is slightly decomposed organic material. Reaction is very strongly acid or strongly acid.

The E horizon has hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 0 to 2. It is fine sandy loam, loamy fine sand or fine sand in the fine earth fraction. Reaction is very strongly acid or strongly acid.

The Bs horizon has hue of 5YR or 7.5YR, value of 3 to 6, and chroma of 3 to 6. It is fine sandy loam or sandy loam in the fine earth fraction. Reaction is very strongly acid or strongly acid.

The BC horizon has hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 or 4. It is fine sandy loam, loamy fine sand or sandy loam in the fine earth fraction. Reaction is very strongly acid or strongly acid.

The 2C horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 2 to 4. It is fine sand, loamy sand, sand or coarse sand in the fine earth fraction. Reaction is strongly acid or moderately acid.

Colton Series

The Colton series consists of very deep, excessively drained soils on terraces and outwash plains. These soils formed in outwash sand and gravel derived from sandstone and granite. Slope ranges from 0 to 70 percent.

Colton soils are commonly adjacent to the Hermon, Adams, Monadnock, Bice, Schroon and Tunbridge soils on the landscape. The Colton soils have gravel in the substrata that is generally uncoated by silts in contrast to Hermon soils which formed in relatively unsorted glacial deposits. Colton soils have more gravel throughout the profile than the sandy Adams soils. Colton soils typically have more sand and gravel, and less silt and clay in the subsoil than Monadnock, Becket, Bice, and Schroon soils. Colton soils are deeper to bedrock than moderately deep Tunbridge soils.

Typical pedon of Colton gravelly loamy coarse sand, strongly sloping, very stony unit, in the Town of Black Brook, 75 feet southwest of Guide Board Road at a point 0.15 mile southeast of the intersection of Church Street and Guide Board Road, in a wooded area; USGS Ausable Forks topographic quadrangle, lat. 44 degrees 28 minutes 4 seconds N. and long. 73 degrees 44 minutes 10 seconds W., NAD 1927:

Oa—0 to 1 inch, black (7.5YR 2/0) decomposed root mat; very strongly acid; abrupt wavy boundary.

E—1 to 3 inches, dark brown (7.5YR 4/2) gravelly loamy coarse sand; weak medium subangular blocky structure; very friable; common coarse, and many fine and very fine roots; 15 percent rock fragments; very strongly acid; abrupt wavy boundary.

Bs—3 to 8 inches, dark brown (7.5YR 3/4) and strong brown (7.5YR 4/6) gravelly loamy coarse sand; weak medium subangular blocky structure; very friable; many medium and fine roots; 15 percent rock fragments; strongly acid; clear wavy boundary.

BC1—8 to 15 inches, strong brown (7.5YR 4/6) gravelly loamy coarse sand; single grain; very friable; many fine and very fine roots; 25 percent rock fragments; strongly acid; gradual wavy boundary.

BC2—15 to 22 inches, yellowish brown (10YR 5/4 and 10YR 5/6) very gravelly coarse sand; single grain; loose; common fine and very fine roots; 50 percent rock fragments; moderately acid; gradual wavy boundary.

C—22 to 72 inches, yellowish brown (10YR 5/4) to brown (10YR 4/3) very gravelly coarse sand; single grain; loose; 50 percent rock fragments; moderately acid.

The thickness of the solum ranges from 18 to 47 inches. Depth to bedrock is more than 60 inches. Rock fragments, mainly gravel and cobbles, range from 15 to 55 percent by volume in the solum, and from 35 to 70 percent in the substratum.

The O horizon has hue of 5YR to 10YR (or it is neutral), value of 2 or 3, and chroma of 0 to 2. It is undecomposed to highly decomposed vegetative litter. Reaction ranges from extremely acid to moderately acid.

The A horizon, if present, has hue of 5YR to 10YR, value of 3 to 5, and chroma of 0 to 3. In areas that have been plowed, pedons have an Ap horizon with chroma of 2 to 4. It ranges from sand or loamy coarse sand to fine sandy loam in the fine earth fraction. Unless limed, reaction ranges from extremely acid to moderately acid.

The E horizon has hue of 5YR to 10YR, value of 4 to 7 and chroma of 1 or 2. It ranges from coarse sand to loamy fine sand in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Bh horizon, if present, has hue of 2.5YR to 7.5YR, value of 2 to 4, and chroma of 1 to 4. It ranges from coarse sand to loamy fine sand in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Bs horizon has hue of 2.5YR to 7.5YR, value of 3 to 6, and chroma of 3 to 6. It ranges from coarse sand to loamy fine sand in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The BC horizon has hue of 5YR to 2.5Y, value of 3 to 6, and chroma of 2 to 6. It ranges from coarse sand to loamy fine sand in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The C horizons have hue of 7.5YR to 2.5Y, value of 3 to 7, and chroma of 2 to 6. It is loamy sand, sand or coarse sand in the fine earth fraction with varying degrees of stratification. Reaction ranges from very strongly acid to slightly acid.

Conic Series

The Conic series consists of moderately deep, well drained soils on glaciated uplands. These soils formed in loamy glacial till over sandstone bedrock. Slopes range from 3 to 15 percent.

The Conic soils are in a drainage sequence with the somewhat poorly drained Chazy soils. Conic soils are also associated in the landscape with the Colosse, Irona, Peasleeville, Schroon, Sunapee and Topknot soils. The Conic soils lack redoximorphic features within 20 inches deep as is characteristic of somewhat poorly drained Chazy and Topknot soils. Conic soils are moderately deep to bedrock in contrast to shallow Irona soils. Moderately deep Conic soils occur near very deep Peasleeville, Schroon and Sunapee soils. Conic soils also have less rock fragments than very deep Colosse soils.

Typical pedon of Conic fine sandy loam, within a map unit of Irona-Conic complex, gently sloping, very rocky, in the Town of Altona, 0.5 mile west of NY Route 190 along Old Townhall Road, and 720 feet northwest along powerline at edge of right-of-way;

USGS West Chazy topographic quadrangle, lat. 44 degrees 49 minutes 1 second N. and long. 73 degrees 36 minutes 51 seconds W., NAD 1927:

Oa—0 to 1 inch, black (5YR 2.5/1) highly decomposed organic material.

E—1 to 4 inches, brown (7.5YR 5/2) fine sandy loam; weak medium subangular blocky structure; friable; many fine and very fine roots; 10 percent rock fragments; very strongly acid; abrupt smooth boundary.

Bw1—4 to 14 inches, brown (7.5YR 4/4) fine sandy loam; weak medium and coarse subangular blocky structure; friable; many fine and very fine, and few medium and coarse roots; 10 percent rock fragments; very strongly acid; gradual wavy boundary.

Bw2—14 to 23 inches, strong brown (7.5YR 4/6) gravelly fine sandy loam; weak fine and medium subangular blocky structure; friable; common very fine roots; 20 percent rock fragments (including 5 percent cobbles); very strongly acid; abrupt smooth boundary.

Cd—23 to 37 inches, brown (10YR 4/3) gravelly fine sandy loam; massive with weak thick plate-like divisions; very firm; common medium distinct light olive brown (2.5Y 5/3) and common fine and medium distinct yellowish brown (10YR 5/6) soft masses of iron oxides on faces of plates; 30 percent rock fragments (including 10 percent cobbles); strongly acid; abrupt smooth boundary.

2R—37 inches, light gray, unweathered, massive sandstone bedrock.

The thickness of solum is 15 to 40 inches. Depth to bedrock is 20 to 40 inches. Rock fragments range from 5 to 20 percent gravel and from 2 to 20 percent stones, boulders and cobbles by volume in the surface, subsoil and friable substratum. Rock fragments in the firm substratum range from 15 to 35 percent by volume.

The O horizon, if present, has hue of 5YR to 10YR, value of 2 or 3 and chroma of 0 to 2.

The A or Ap horizon, if present, has hue of 7.5YR or 10YR, value of 2 or 3 and chroma of 2 or 3. Texture is silt loam, loam, fine sandy loam or sandy loam in the fine earth fraction. Reaction is extremely acid to moderately acid.

The E horizon has hue of 7.5YR or 10YR, value of 4 to 6 and chroma of 1 or 2. Texture is silt loam, loam, fine sandy loam or sandy loam in the fine earth fraction. Reaction is extremely acid to moderately acid.

The Bw horizon has hue of 7.5YR or 10YR, value of 4 to 6 and chroma of 4 to 6. Texture is silt loam, loam, fine sandy loam or sandy loam in the fine earth fraction. Reaction is extremely acid to moderately acid.

The BC horizon, if present, has hue of 7.5YR or 10YR, value of 4 to 6 and chroma of 2 to 4. Texture is fine sandy loam or sandy loam in the fine earth fraction. Reaction is extremely acid to moderately acid.

The Cd or C horizon has hue of 7.5YR or 10YR, value of 4 or 5 and chroma of 3 to 6. Texture is fine sandy loam or sandy loam in the fine earth fraction. Reaction is very strongly acid to moderately acid.

Cook Series

The Cook series consists of very deep, very poorly drained soils on slightly depressional areas of glacial till plains. These soils formed in predominantly sandy glacial till material influienced by wave action from glacial lakes. Slopes range from 0 to 3 percent.

Cook soils were formed in material similar to the moderately well drained Fahey soils and somewhat poorly drained Coveytown soils. Cook soils are also near the Colosse, Trout River and Malone soils. The Cook soils are dominated by areas of iron depletion and have less rock fragments than the somewhat excessively drained

Colosse and Trout River soils. Cook soils have more sand than the Malone soils which are loamy and somewhat poorly drained.

Typical pedon of Cook mucky loamy fine sand, in the Town of Beekmantown, 600 feet south of the end of Kelley Road and 200 feet weat of road in a pasture; USGS Morrisonville topographic quadrangle, lat. 44 degrees 44 minutes 28 seconds N. and long. 73 degrees 33 minutes 33 seconds W., NAD 1927:

Ap—0 to 7 inches, very dark grayish brown (10YR 3/2) mucky loamy fine sand; dark grayish brown (10YR 4/2) dry; moderate medium granular structure; friable; many fine and very fine roots; 13 percent rock fragments; moderately acid; abrupt smooth boundary.

Cg1—7 to 9 inches, grayish brown (10YR 5/2) gravelly sand; massive; loose; common fine and very fine roots; few fine faint light brownish gray (10YR 6/2) areas of iron depletion, and few fine prominent yellowish brown (10YR 5/6), common medium distinct reddish brown (5YR 5/3), few fine distinct brown (10YR 5/3) soft masses of iron oxides; 20 percent rock fragments; slightly acid; clear wavy boundary.

Cg2—9 to 18 inches, light brownish gray (10YR 6/2) gravelly sand; massive; loose; few fine roots; common fine distinct yellowish brown (10YR 5/4) and few fine faint pale brown (10YR 6/3) soft masses of iron oxides, and few fine faint dark grayish brown (10YR 4/2) areas of iron depletion; 25 percent rock fragments; slightly acid; clear wavy boundary.

Cg3—18 to 23 inches, grayish brown (10YR 5/2) gravelly sand; massive; loose; few very fine roots; common medium faint brown (10YR 5/3) and common coarse faint pale brown (10YR 6/3) soft masses of iron oxides; 34 percent rock fragments; neutral; clear wavy boundary.

2Cg4—23 to 72 inches, light brownish gray (10YR 6/2) gravelly fine sandy loam; massive; firm; many coarse prominent yellowish brown (10YR 5/4 and 5/6) soft masses of iron oxides; 25 percent rock fragments; slightly alkaline, slightly effervescent.

Depth to carbonates ranges from 24 to 80 inches or more. The depth to loamy material is 20 to 39 inches. Depth to bedrock is greater than 60 inches. Rock fragments range from 5 to 35 percent by volume in the sandy mantle above 30 inches and from 20 to 50 percent in the loamy substratum below, averaging less than 35 percent in the 10 to 40 inch control section.

The Ap horizon has hue of 7.5YR to 2.5Y, value of 2 or 3 and chroma of 1 or 2. Texture is loamy sand, loamy fine sand, mucky loamy fine sand and fine sandy loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The Cg horizon has hue of 10YR to 5Y, value of 4 to 6 and chroma of 0 to 2 with few or common masses of iron oxides and areas of iron depletion. Texture is sand, loamy sand or loamy fine sand in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The 2Cg horizon has hue of 10YR to 5Y, value of 4 to 6 and chroma of 1 or 2 with few to many masses of iron oxides and areas of iron depletion. Texture is sandy loam, fine sandy loam or loam in the fine esrth fraction. Reaction is neutral to moderately alkaline.

Cornish Series

The Cornish series consists of very deep, somewhat poorly drained soils on flood plains. These soils formed in alluvial sediments dominated by very fine sand and silt. Slopes range from 0 to 2 percent.

The Cornish soils are in a drainage sequence with moderately well Lovewell soils and the very poorly drained Medomak soils. Cornish soils are also on the landscape near the Monadnock, Kalurah, Adams, Colton and Wonsqueak soils. Cornish soils

have fewer rock fragments than are present in Monadnock and Kalurah soils that formed in glacial till. The Cornish soils have an irregular organic carbon content in its profile and are subject to common flooding. Adams and Colton soils have organic carbon that decreases with depth and are not flood prone. Cornish soils do not have a thick organic layer as in the Wonsqueak soils.

Typical pedon of Cornish silt loam, in the Town of Champlain, about 250 feet north of intersection of Simmons Road with St.John's Road, and 2,200 feet east of St.John's Road in a cornfield; USGS Mooers topographic quadrangle, lat. 44 degrees 57 minutes 14 seconds N. and long. 73 degrees 30 minutes 42 seconds W., NAD 1927:

Ap—0 to 8 inches, very dark grayish brown (10YR 3/2) silt loam; pale brown (10YR 6/3) dry; moderate fine and medium granular structure; friable; many very fine and few fine roots; neutral (limed); abrupt smooth boundary.

Bw1—8 to 14 inches, brown (10YR 5/3) silt loam; weak medium and thick platy structure; friable; many very fine roots; common fine and very fine pores; many fine and medium distinct yellowish brown (10YR 5/6) and many fine distinct strong brown (7.5YR 5/6) soft masses of iron oxides, and common fine distinct light brownish gray (10YR 6/2) areas of iron depletion; moderately acid; clear smooth boundary.

Bw2—14 to 22 inches, brown (10YR 5/3) silt loam, weak thick platy structure; friable common very fine roots; many fine and very fine pores; light brownish gray (10YR 6/2)) areas of iron depletion on faces of plates; many medium and fine distinct yellowish brown (10YR 5/6) and many medium distinct dark yellowish brown (10YR 4/6) soft masses of iron oxides, and few fine distinct very dark brown (10YR 2/2) masses of manganese oxides; moderately acid; clear wavy boundary.

BCg—22 to 28 inches, light brownish gray (10YR 6/2) silt loam; weak very thick and thick platy structure; friable; common very fine roots; many fine and very fine, and common medium pores; common medium distinct yellowish brown (10YR 5/6) and many medium distinct dark yellowish brown (10YR 4/6) soft masses of iron oxides, and few fine distinct very dark brown (10YR 2/2) masses of manganese oxides; moderately acid; gradual smooth boundary.

Cg1—28 to 56 inches, light brownish gray (10YR 6/2) silt loam; massive; friable; few very fine roots in upper part; many fine and very fine, common medium, and few coarse pores; few fine distinct yellowish brown (10YR 5/6), many medium and coarse dark yellowish brown (10YR 4/6), and few medium distinct dark brown (7.5YR 3/4) masses of iron oxides; slightly acid; abrupt smooth boundary.

Cg2—56 to 66 inches, bluish gray (5BG 5/1) silt loam; massive; friable, slightly plastic, slightly sticky; neutral; clear smooth boundary.

Cg3—66 to 72 inches, dark gray (10YR 4/1) very fine sandy loam; massive; very friable, slightly plastic; neutral; clear smooth boundary.

The thickness of the solum ranges from 20 to 38 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments are generally absent but range up to 5 percent by volume. Some pedons have buried horrizons.

The Ap horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 4. It is silt loam or very fine sandy loam in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The Bw horizon has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 3 to 6. It is silt loam or very fine sandy loam in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The BC horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 3 to 6. A chroma of 2 occurs at depths below 20 inches. It is silt loam or very fine sandy loam in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The C horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 to 4. It is silt

loam, very fine sandy loam or loamy very fine sand in the fine earth fraction. Below a depth of 40 inches, texture ranges from silt loam to fine gravel. Reaction ranges from very strongly acid to slightly acid above 40 inches and to neutral below 40 inches.

Covert Series

The Covert series consists of very deep, moderately well drained soils on outwash plains, deltas, and beach deposits. These soils formed in sand or fine sand deposits. Slope ranges from 0 to 8 percent.

The Covert soils are in a drainage sequence with the excessively drained Grattan soils and the somewhat poorly drained Pipestone soils. The Covert soils occur on the landscape near the Shaker, Covertfalls, Northway and Bombay soils. The Covert soils are not loamy over clayey as is characteristic of Shaker soils. Covert soils do not have the higher gravel content in the Covertfalls (gravelly phase) soils. The Covert soils lack the loamy substratum that is typical of Covertfalls and Northway soils. Covert soils are dominantly sands whereas Bombay soils are formed in loamy till material.

Typical pedon of Covert loamy sand, in the Town of Plattsburgh, northwest of Connecticut Road on Plattsburgh Air Force Base behind a group of three dormitory buildings in a woodlot; USGS Plattsburgh topographic quadrangle, lat. 44 degrees 39 minutes 53 seconds N. and long. 73 degrees 27 minutes 22 seconds W., NAD 1927:

Oe—0 to 3 inches, black (10YR 2/1) hemic material; weak fine subangular blocky structure; very friable; common medium, fine and very fine roots; many fine and very fine pores; abrupt smooth boundary.

A—3 to 6 inches, very dark gray (10YR 3/1) loamy sand; weak fine granular structure; very friable; common medium, fine and very fine roots; common fine and very fine pores; strongly acid; abrupt smooth boundary.

E—6 to 8 inches, dark gray (10YR 4/1) loamy sand; weak fine granular structure; loose; common fine and very fine roots; few medium, and common fine and very fine pores; strongly acid; abrupt smooth boundary.

Bs1—8 to 19 inches, dark brown (7.5YR 3/4) loamy sand; weak fine subangular blocky structure; very friable; common fine and very fine roots; few medium, and common fine and very fine pores; strongly acid; clear smooth boundary.

Bs2—19 to 30 inches, brown (7.5YR 4/4) loamy sand; weak fine subangular blocky structure; very friable; few fine and very fine roots; few medium, and common fine and very fine pores; strongly acid; clear smooth boundary.

BC—30 to 37 inches, strong brown (7.5YR 4/6) loamy sand; single grain; loose; few very fine roots; few medium, and common fine and very fine pores; moderately acid; gradual smooth boundary.

C1—37 to 52 inches, brown (7.5YR 5/4) sand; single grain; loose; few medium, and common fine and very fine pores; common fine distinct strong brown (7.5YR 5/6) masses of iron oxides, and few fine distinct very dark grayish brown (10YR 3/2) areas of iron depletion; moderately acid; gradual smooth boundary.

C2—52 to 72 inches, grayish brown (10YR 5/2) sand; single grain; loose; common medium, fine and very fine pores; common fine distinct brown (7.5YR 4/4), and few fine distinct dark brown (10YR 3/3) masses of iron oxides; moderately acid.

The thickness of the solum ranges from 24 to 45 inches. Redoximorphic features occur within 40 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments range from 0 to 5 percent by volume throughout the profile.

The A horizon has hue of 7.5YR or 10YR, value of 2 to 4 and chroma of 0 or 1. The Ap horizon has similar hue and value with chroma of 1 to 3. It is sand or loamy sand in the fine earth fraction. Reaction ranges from very strongly acid to neutral.

The E horizon has hue of 7.5YR or 10YR, value of 4 to 7, and chroma of 1 to 3. It is

sand or loamy sand in the fine earth fraction. Reaction ranges from very strongly acid to neutral.

The Bs horizon has hue of 5YR or 7.5YR, value of 3 to 6, and chroma of 4 to 6. It is sand or loamy sand in the fine earth fraction. Reaction ranges from very strongly acid to neutral.

The BC horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 8. Redoximorphic features occur in some pedons. It is sand or loamy sand in the fine earth fraction. Reaction ranges from very strongly acid to neutral.

The C horizon has hue of 5YR to 10YR, value of 4 to 7, and chroma of 1 to 8. Redoximorphic features are few to common. It is sand or fine sand in the fine earth fraction. Reaction ranges from strongly acid to moderately alkaline.

Covertfalls Series

The Covertfalls series consists of very deep, moderately well drained soils on glacial lake plains and uplands. These soils formed in outwash sands overlying loamy glacial till. Slopes range from 0 to 8 percent.

The Covertfalls soils are in a drainage sequence with the somewhat poorly drained Northway soils. Covertfalls soils are also associated with the Amenia, Bombay, Covert, Grattan, Massena, and Pipestone soils. Covert and Grattan soils generally occur on smoother slopes and are very deep to loamy till deposits. Pipestone soils are on slightly concave or lower positions on the landscape and are also very deep to loamy till. Amenia, Bombay and Massena soils occur in nearby glacial till deposits where the sandy mantle is absent.

Typical pedon of Covertfalls loamy fine sand, 0 to 3 percent, in the Town of Schuyler Falls, about 1,200 feet east of intersection of Military Turnpike Extension and Carbide Road, and about 1,000 feet south of Carbide Road, USGS Morrisonville topographic quadrangle, lat. 44 degrees 39 minutes 48 seconds N. and long. 73 degrees 30 minutes 13 seconds W., NAD 1927:

A—0 to 8 inches, very dark brown (10YR 2/2) loamy fine sand; light brownish gray (10YR 6/2) dry; medium fine and very fine granular structure; very friable; many fine, very fine and medium, and few coarse roots; common medium, and many fine and very fine pores; 5 percent rock fragments; moderately acid; clear smooth boundary.

Bs1—8 to 10 inches, dark reddish brown (5YR 3/4) loamy fine sand; weak medium subangular blocky structure; friable; many fine and very fine, common medium, and few coarse roots; common medium, and many fine and very fine pores; 5 percent rock fragments; moderately acid; clear broken boundary.

Bs2—10 to 20 inches, brown (7.5YR 4/4) loamy fine sand; weak medium and coarse subangular blocky structure; very friable; many fine and very fine, common medium, and few coarse roots; common medium, and many fine and very fine pores; 10 percent rock fragments; moderately acid; clear smooth boundary.

BC—20 to 26 inches, brown (10YR 5/3) loamy fine sand; weak coarse and very coarse subangular blocky structure; very friable; few very fine and fine roots; common medium and coarse distinct yellowish brown (10YR 5/6 and dark yellowish brown (10YR 4/6) masses of iron oxides; 10 percent cobbles; neutral; abrupt smooth boundary.

2C1—26 to 41 inches, brown (10YR 5/3) cobbly loam; massive with weak very thick and thick plate-like divisions, some plate surfaces are light brownish gray (10YR 6/2); friable; few very fine roots in upper part; common medium, and many fine and very fine pores; many medium distinct yellowish brown (10YR 5/6) masses of iron oxides;, few fine black (2.5Y 2/0) masses of manganese oxides; 20 percent rock fragments (including 10 percent gravel); neutral; gradual smooth boundary.

2C2—41 to 72 inches, grayish brown (10YR 5/2) cobbly loam; massive; firm; common fine and very fine pores; few medium and coarse distinct yellowish brown (10YR 5/6) masses of iron oxides; 20 percent rock fragments (including 10 percent gravel); slightly effervescent, slightly alkaline.

The thickness of the solum is 18 to 40 inches. Depth to carbonates is greater than 30 inches. Depth to bedrock is greater than 60 inches. Redoximorphic features occur within 30 inches of the mineral soil surface. Rock fragments range from 0 to 30 percent by volume in the solum, and from 5 to 35 percent in the substratum.

Some pedons have a thin Oi or Oe horizon.

The A horizon has hue of 7.5YR or 10YR, value and chroma of 2 or 3. Texture is loamy fine sand or loamy sand in the fine earth fraction, and less commonly fine sand or sand. Reaction ranges from very strongly acid to moderately acid.

The E horizon, if present, has hue of 7.5YR or 10YR, value of 5 or 6 and chroma of 1 or 2. Texture is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid. The Bhs horizon, if present, is up to 3 inches thick. It has a hue of 5YR or 7.5YR, value of 4 and chroma of 2 or 3. Texture is loamy fine sand or loamy sand in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid.

The Bs horizon has hue of 5YR or 7.5YR, value of 3 to 5 and chroma of 4 to 6. It may have faint or distinct redox concentrations. Texture is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid.

The BC horizon has hue of 10YR, value of 4 to 6 and chroma of 3 or 4. It has faint or distinct redox concentrations or depletions. Texture is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction ranges from moderately acid to neutral

The 2C horizon has hue of 10YR or 2.5Y, value of 4 to 6 and chroma of 2 to 4. It has faint or distinct redox concentrations or depletions. Texture is loam or fine sandy loam in the fine earth fraction. Reaction ranges from moderately acid to moderately alkaline in the substratum.

Coveytown Series

The Coveytown series consists of very deep, somewhat poorly drained soils on footslopes of glacial lake beaches. These soils formed in glacial till deposits modified by both wave action and deposition of sands. Slopes range from 0 to 8 percent.

The Coveytown soils are in a drainage sequence with the moderately well drained Occur soils and the very poorly drained Cook soils. Coveytown soils are commonly adjacent to Malone, Runeberg, Sciota Trout River and Fahey soils on the landscape. The Coveytown soils have a sandy mantle at least 20 inches thick which is absent in the Malone and Runeberg soils. Coveytown soils have a loamy substratum within a 40 inch depth which is absent in the Sciota soils. The Coveytown soils have less rock fragments than Trout River and Fahey soils.

Typical pedon of Coveytown loamy sand, 0 to 3 percent slopes, in the Town of Chazy, about 1,000 feet west of railroad track crossing on Slosson Road, and about 600 feet north of Slosson Road in a field reverting to brush; USGS West Chazy topographic quadrangle, lat. 44 degrees 50 minutes 36 seconds N. and long. 73 degrees 30 minutes 15 seconds W., NAD 1927:

Ap—0 to 8 inches, very dark grayish brown (10YR 3/2) loamy sand, light brownish gray (10YR 6/2) dry; weak fine and medium subangular blocky structure to weak fine granular; very friable; many very fine and fine roots; 11 percent (including 1 percent cobbles); neutral (limed); clear smooth boundary.

BA—8 to 10 inches, 70 percent yellowish brown (10YR 5/4) and 30 percent very dark grayish brown (10YR 3/2) sand; weak fine and medium subangular blocky structure; friable; many very fine and fine roots; 5 percent rock fragments; neutral; clear wavy boundary.

Bw—10 to 17 inches, light yellowish brown (2.5Y 6/3) sand; weak medium and fine subangular blocky structure; very friable; many very fine and common fine roots; common coarse and medium distinct yellowish brown (10YR 5/6) masses of iron oxides and few fine distinct light brownish gray (10YR 6/2) areas of iron depletion; 6 percent rock fragments (including 1 cobbles); neutral; gradual wavy boundary.

Bg—17 to 28 inches, 70 percent light brownish gray (10YR 6/2) and 30 percent pale brown (10YR 6/3) sand; very weak thick platy structure; very friable; common fine and very fine roots; few coarse and medium distinct dark yellowish brown (10YR 4/4) and common coarse and medium distinct yellowish brown (10YR 5/6) masses of iron oxides; 5 percent rock fragments; neutral; clear wavy boundary.

2Cg1—28 to 48 inches, dark grayish brown (2.5Y 4/2) gravelly fine sandy loam, weak very coarse prismatic structure; friable (firm in place); few fine roots along faces of prisms; few fine and medium pores; gray (10YR 6/1) faces of prisms; many medium and fine distinct light olive brown (2.5Y 5/6) and common medium and coarse distinct yellowish brown (10YR 5/6) masses of iron oxides; 30 percent rock fragments (including 5 cobbles); neutral; gradual wavy boundary.

2Cg2—48 to 72 inches, grayish brown (2.5Y 5/2) gravelly sandy loam; weak very coarse prismatic structure; friable; few fine and medium pores; gray (10YR 6/1) faces of prisms; common fine distinct dark yellowish brown (10YR 4/6) masses of iron oxides; 34 percent rock fragments (including 5 cobbles); moderately alkaline; strongly effervescent.

The thickness of the solum ranges from 20 to 39 icnhes. Depth to carbonates is 30 to 80 inches. Depth to bedrock is greater than 60 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Rock fragments range from 5 to 35 percent by volume in the surface and subsoil, and from 25 to 35 percent in the substratum.

The A or Ap horizon has hues of 7.5YR or 10YR, value of 3 or 4 and chroma of 1 to 3. Texture is fine sandy loam, loamy fine sand, loamy sand or sand in the fine earth fraction. Reaction is strongly acid to slightly acid.

The BA horizon, if present, has hue of 7.5YR or 10YR, value of 3 to 6 and chroma of 2 to 4. Texture is loamy fine sand, loamy sand or sand in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The B horizon has hue of 10YR or 2.5Y, value of 3 to 6 and chroma of 1 to 4. It has faint or distinct redoximorphic features. Texture is loamy fine sand, loamy sand or sand in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The BC horizon, if present, has a hue of 10YR or 2.5Y, value of 4 to 6 and chroma of 1 to 4. Texture is loamy fine sand, loamy sand or sand in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The 2C horizon has hue of 10YR to 5Y, value of 4 to 6 and chroma of 1 to 6. Texture is loam, fine sandy loam or sandy loam in the fine earth fraction. Reaction ranges from slightly acid to moderately alkaline.

Croghan Series

The Croghan series consists of very deep, moderately well drained soils on stream terraces, outwash plains, lake plains, and deltas. These soils formed in acid sandy deposits. Slopes range from 0 to 8 percent.

Croghan soils are in a drainage sequence with the somewhat excessively drained and excessively drained Adams soils, the somewhat poorly drained Wainola soils, and the poorly drained Deinache soils. Croghan soils are on landscapes near Flackville,

Fahey, Occur and Monadnock soils. Croghan soils lack the clayey substratum characteristic of Flackville soils. Croghan soils have less gravel in the surface and subsoil than Fahey soils. The Croghan soils do not have loamy substrata as in Occur soils. Croghan soils have less rock fragments, silt and clay than Monadnock soils.

Typical pedon of Croghan loamy fine sand, 0 to 3 percent slope, in the Town of Mooers, about 1,650 feet south of the intersection of LaValley Road with River Road and about 300 feet west of cornfield, in a wooded area; USGS Mooers topographic quadrangle, lat. 44 degrees 56 minutes N. and long. 73 degrees 31 minutes 32 seconds W., NAD 1927:

Oe—0 to 1 inch, black (5YR 2.5/1) moderately decomposed organic material; weak fine granular structure; very friable; many very fine and fine roots; extremely acid; abrupt smooth boundary.

A—1 to 3 inches, black (5YR 2.5/1) loamy fine sand; weak fine granular structure; very friable; many very fine and fine, and common medium roots; extremely acid; abrupt wavy boundary.

E—3 to 9 inches, pinkish gray (7.5YR 6/2) fine sand; few very dark gray (5YR 3/1) organic stains in the upper part; single grain; loose; common very fine and fine roots; very strongly acid; abrupt wavy boundary.

Bhs—9 to 11 inches, dark reddish brown (5YR 3/3) fine sand; weak thick platy structure; friable; few very fine and fine roots; strongly acid; clear wavy boundary.

Bs—11 to 16 inches, mixed reddish brown (2.5YR 4/4) and dark reddish brown (2.5YR 3/4) fine sand; weak medium subangular blocky structure; very friable; few fine roots; very strongly acid; clear wavy boundary.

BC—16 to 33 inches, brown (7.5YR 4/4) fine sand; single grain; loose; common fine and medium distinct strong brown (7.5YR 5/6) and few fine faint light brown (7.5YR 6/4) masses of iron oxides; strongly acid; clear wavy boundary.

C—33 to 72 inches, pinkish gray (7.5YR 6/2) fine sand; single grain; loose; many fine distinct strong brown (7.5YR 5/6) masses of iron oxides; moderately acid.

The thickness of the solum ranges from 20 to 50 inches. Depth to bedrock is greater than 60 inches. Redoximorphic features occur at depths ranging from 12 to 20 inches below the mineral soil surface. Rock fragments range from 0 to 5 percent by volume in the surface, and from 0 to 15 percent in the subsoil and substratum.

The O horizon has hue of 5YR to 10YR or it is neutral, with of 2 or 3 and chroma of 1 or 2. Reaction ranges from extremely acid to moderately acid.

The A horizon has hue of 5YR to 10YR, value of 2 to 4 and chroma of 1 or 2. Texture is loamy fine sand to sand in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The E horizon has hue of 5YR to 10YR, value of 5 to 7, and chroma of 1 or 2. Texture is loamy fine sand to sand in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid.

The Bhs horizon has hue of 2.5YR to 7.5YR, value and chroma of 3. Texture is loamy fine sand to sand in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid.

The Bs horizon has hue of 2.5YR to 7.5YR, value of 3 to 6, and chroma of 3 to 8. Texture is loamy fine sand to sand in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid.

The BC horizon has hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 2 to 6. Texture is loamy fine sand to sand in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid.

The C horizon has hue of 7.5YR to 5Y, value of 4 to 7, and chroma of 2 to 6. Texture is loamy sand, fine sand, sand, or coarse sand in the fine earth fraction. Thin strata of very fine sandy loam, fine sandy loam or loamy fine sand are present in some pedons below 40 inches. Reaction ranges from very strongly acid to moderately acid.

Deerfield Series

The Deerfield series consists of very deep, moderately well drained soils on deltas, terraces and outwash plains. These soils formed in sandy glaciofluvial deposits. Slopes range from 0 to 8 percent.

Deerfield soils are in a drainage sequence with the excessively drained Plainfield soils, the somewhat poorly drained Junius soils and the poorly drained Gougeville soils. Deerfield soils are also near the Covert, Pipestone, Covertfalls, Bombay, Appleton, Kingsbury and Rhinebeck soils on the landscape. The Deerfield soils do not have reddish brown spodic horizons which are characteristic of Covert and Pipestone soils. Deerfield soils are sandy throughout the profile, while Covertfalls soils have a loamy substratum within 40 inches deep. Deerfield soils do not have as much silt and clay as the loamy Bombay and Appleton soils or the clayey Kingsbury and Rhinebeck soils.

Typical pedon of Deerfield fine sand, 0 to 3 percent slopes, in the Town of Peru, 655 feet west of Nelson Road at a point 0.5 mile north of the intersection of Rock Street and the Nelson Road in a wooded area; USGS Keeseville topographic quadrangle, lat. 44 degrees 36 minutes 50 seconds W. and long. 73 degrees 28 minutes 36 seconds N., NAD 1927:

A—0 to 1 inch, very dark grayish brown (10YR 3/2) fine sand; weak fine granular structure; very friable; many fine, very fine and medium roots; strongly acid; abrupt smooth boundary.

AE—1 to 6 inches, brown (10YR 4/3) fine sand; weak medium subangular blocky structure; friable; common fine and very fine and few medium roots; very strongly acid; abrupt smooth boundary.

Bw—6 to 17 inches, yellowish brown (10YR 5/6) fine sand; weak coarse subangular blocky structure; friable; few fine roots; moderately acid; clear smooth boundary.

BC—17 to 31 inches, brown (10YR 5/3) fine sand; weak coarse subangular blocky structure; very friable; few very fine roots; common fine distinct yellowish brown (10YR 5/6) and common fine faint dark yellowish brown (10YR 4/6) masses of iron oxides; strongly acid; clear smooth boundary

C1—31 to 37 inches, brown (10YR 5/3) fine sand; weak fine subangular blocky structure; very friable; few fine distinct dark yellowish brown (10YR 4/6) masses of iron oxides and few coarse distinct light gray (10YR 7/2) areas of iron depletion; moderately acid; clear smooth boundary.

C2—37 to 72 inches, dark gray (10YR 4/1) fine sand; single grain; loose; few fine distinct yellowish brown (10YR 5/6) masses of iron oxides; slightly acid.

The thickness of the solum ranges from 15 to 35 inches. Depth to bedrock is greater than 60 inches. Redoximorphic features occur between 15 and 40 inches below the mineral soil surface. Rock fragments are mostly gravel and range from 0 to 15 percent by volume in the solum and from 0 to 20 percent by volume in the substratum.

The A horizon has hue of 10YR, value of 2 to 4 and chroma of 1 to 3. Texture ranges from fine sandy loam to sand in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The AE horizon, if present, has hue of 10YR, value of 4 or 5 and chroma of 3. Texture ranges from fine sandy loam to sand in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The B horizon has hue of 7.5YR to 2.5Y, value of 4 to 6 and chroma of 2 to 6. Texture ranges from fine sandy loam to sand above 10 inches deep, and loamy fine sand to coarse sand below 10 inches deep in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The BC horizon, if present, has hue of 7.5YR to 2.5Y, value of 4 to 6 and chroma of

1 to 4. Texture ranges from loamy fine sand to coarse sand in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The C horizons have hue of 7.5YR to 5Y, value of 4 to 6 and chroma of 1 to 4. Texture ranges from fine sand to coarse sand in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

Deinache Series

The Deinache series consists of very deep, poorly drained soils that formed on nearly level sandy areas within lake plains. Slopes range from 0 to 3 percent.

The Deinache soils are in a drainage sequence with moderately well drained Mooers and the somewhat poorly drained Sciota soils. Deinache soils are also near the Wonsqueak, Wainola, Flackville, Pinconning and Cook soils in the landscape. The Deinache soils lack the 16 to 51 inches of organic deposits over mineral soil that compose Wonsqueak soils. Deinache soils are slightly lower on the landscape than Wainola soils and lack spodic horizons. Deinache soils are deep sands whereas Flackville, Pinconning and Cook soils have sands underlain by finer-textured deposits within a 40 inch depth.

Typical pedon of Deinache fine sand, in the Town of Mooers, 0.75 mile southeast of junction of LaValley Road with Angelville Road and 4,000 feet south of LaValley Road in a cornfield; USGS Mooers topographic quadrangle, lat. 44 degrees, 55 minutes, 30 seconds N. and long. 73 degrees 31 minutes 30 seconds W., NAD 1927:

Ap—0 to 9 inches, very dark brown (10YR 2/2) fine sand; gray (10YR 5/1) dry; weak fine and medium subangular blocky structure parting to weak fine granular; very friable; many very fine, and common fine roots; strongly acid; abrupt smooth boundary.

Cg1—9 to 19 inches, grayish brown (10YR 5/2) fine sand; single grain; loose; few very fine roots; common medium and fine distinct yellowish brown (10YR 5/6) masses of iron oxides; neutral; clear smooth boundary.

Cg2—19 to 25 inches, light brownish gray (10YR 6/2) fine sand; massive; very friable; common medium and coarse distinct yellowish brown and dark yellowish brown (10YR 5/6 and 4/6) masses of iron oxides; slightly alkaline; clear smooth boundary.

Cg3—25 to 35 inches, light brownish gray (10YR 6/2) fine sand; massive; very friable; common medium and fine pores; few fine and medium yellowish brown (10YR 5/6) masses of iron oxides and common 1/4 inch to 1/2 inch vertical strong brown (7.5YR 4/6) and yellowish brown (10YR 5/6) streaks of iron oxides; slightly alkaline; abrupt smooth boundary.

Cg4—35 to 44 inches, dark gray (N 4/0) loamy fine sand; massive; very friable; few medium and fine pores; few medium and coarse distinct dark yellowish brown (10YR 4/6) streaks of iron oxides around pores; slightly alkaline, clear smooth boundary.

2Cg5—44 to 48 inches, very dark gray (N 3/0) loamy very fine sand; massive; very friable; few fine and very fine pores; few fine and medium distinct yellowish brown and dark yellowish brown (10YR 5/6 and 4/6) streaks and masses of iron oxides; slightly alkaline; clear smooth boundary.

2Cg6—48 to 64 inches, dark gray (N 4/0) very fine sandy loam; massive; very friable; slightly alkaline; clear smooth boundary.

2Cg7—64 to 72 inches, dark gray (N 4/0) silt loam; massive; friable; few fine pores; slightly alkaline; gradual smooth boundary.

The thickness of the solum ranges from 6 to 25 inches. Carbonates, if present, are below a depth of 50 inches. Redoximorphic features occur within 20 inches of the

mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments are typically absent, but may range up to 2 percent by volume in the substratum.

The Ap horizon has hue of 10YR, value of 2 or 3 and chroma of 1 or 2. The A horizon in uncultivated areas has value or chroma one-unit lower than an Ap horizon. Texture is fine sand, loamy fine sand or fine sandy loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The Bg horizon, if present, has hue of 10YR to 5Y (or is neutral), value of 4 to 6, and chroma of 0 to 2. Texture is fine sand or loamy fine sand in the fine earth fraction. Reaction is neutral to moderately alkaline.

The Cg and 2Cg horizons have hue of 10YR to 5Y (or are neutral), value of 3 to 6, and chroma of 0 to 2. Texture above a 40 inch depth is fine sand or loamy fine sand in the fine earth fraction. Below 40 inches, texture also includes loamy very fine sand, very fine sandy loam and thin subhorizons (generally less than 10 inches) of silt loam. Reaction ranges from neutral to moderately alkaline.

Fahey Series

The Fahey series consists of very deep, moderately well drained soils on glacial lake beaches and outwash plains. These soils formed in wave-worked glacial till and outwash sands and gravel. Slopes range from 0 to 8 percent.

Fahey soils are in a drainage sequence with somewhat poorly drained Coveytown soils and very poorly drained Cook soils. Fahey soils are commonly adjacent to the Kalurah, Hogansburg, Occur, Wainola, Colosse and Trout River soils. The Fahey soils have more gravel and sand in the profile than the Kalurah and Hogansburg soils. Fahey soils have more gravel throughout the profile than the Occur and Wainola soils. Fahey soils have redoximorphic features in the lower subsoil whereas Colosse and Trout River soils do not.

Typical pedon of Fahey gravelly fine sandy loam, 3 to 8 percent slopes, loamy substratum, in the Town of Mooers, about 1.0 mile east of Blackman Corners Road and 150 feet north of Eddy Road in a hayfield; USGS Altona topographic quadrangle, lat. 44 degrees 59 minutes 48 seconds N. and long. 73 degrees 38 minutes 4 seconds W., NAD 1927:

Ap—0 to 9 inches, very dark grayish brown (10YR 3/2) gravelly fine sandy loam; grayish brown (10YR 5/2) dry; weak fine granular structure; very friable; common medium, many fine and very fine roots; common medium, fine and very fine pores; 20 percent rock fragments (including 5 percent cobbles); strongly acid; abrupt smooth boundary.

Bs—9 to 18 inches, brown (7.5YR 4/4) very gravelly loamy fine sand; weak medium and fine subangular blocky structure; very friable; many fine and very fine roots; common medium, fine and very fine pores; 40 percent rock fragments (including 10 percent cobbles); strongly acid; clear wavy boundary.

BC—18 to 27 inches, dark yellowish brown (10YR 4/4) very gravelly loamy fine sand; weak fine subangular blocky structure; very friable; few fine and common very fine roots; common medium, fine and very fine pores; common fine distinct light brownish gray (10YR 6/2) areas of iron depletion and common fine distinct strong brown (7.5YR 5/6) soft masses of iron oxides in lower part; 45 percent rock fragments (including 10 percent cobbles); moderately acid; clear smooth boundary.

C—27 to 45 inches, brown (10YR 4/3) very gravelly sand; single grain; loose; many medium, common fine and very fine pores; common fine distinct light brownish gray (10YR 6/2) areas of iron depletion and common fine distinct strong brown (7.5YR 5/6) soft masses of iron oxides; 50 percent rock fragments (including 10 percent cobbles); slightly acid; clear smooth boundary.

2C—45 to 72 inches, light olive brown (2.5Y 5/4) very gravelly silt loam; massive; friable; many fine and very fine pores; many medium distinct light brownish gray (2.5Y 6/2) areas of iron depletion and many fine distinct brown (10YR 5/3) soft masses of iron oxides; 55 percent rock fragments (including 15 percent cobbles); slightly acid.

The thickness of the solum ranges from 24 to 36 inches. The depth to loamy layers is more than 40 inches. Redoximorphic features occur within 30 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments range from 0 to 35 percent by volume in the surface layer, 20 to 50 percent in the subsoil, and 30 to 70 percent in the substratum. Rock fragments average more than 35 percent by volume at depths from 10 to 40 inches.

In undisturbed areas, the soil may have an Oe or Oa horizon.

The Ap horizon has hue of 5YR to 10YR, value of 2 to 4 and chroma of 1 to 3. It is loamy sand, loamy fine sand or fine sandy loam in the fine earth fraction. Unless the soil is limed, reaction ranges from very strongly acid to moderately acid.

Some pedons have an E horizon.

The Bs horizon has hue of 7.5YR, value of 4 to 6, and chroma of 3 to 6. Texture is sand, loamy sand or loamy fine sand in the fine earth fraction. Reaction is strongly acid or moderately acid.

The BC horizon has hue of 7.5YR to 2.5Y, value of 3 to 6 and chroma of 3 to 5. It is sand, loamy sand or loamy fine sand in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The C horizon has hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 2 to 4. It is sand or fine sand in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The 2C horizon, which is commonly present below 40 inches, has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 3 to 6. It is fine sandy loam, loam or silt loam in the fine earth fraction. Reaction ranges from moderately acid to moderately alkaline.

Fernlake Series

The Fernlake series consists of very deep, somewhat excessively drained soils on uplands. These soils formed in sandy glacial till. Slopes range from 3 to 60 percent.

The Fernlake soils are on landscapes near the Monadnock, Sunapee, Adirondack, Hermon, Adams, and Colton soils. Fernlake soils have a higher sand content in the solum than the Monadnock, Sunapee, and Adirondack soils. Fernlake soils have less rock fragments than the Hermon and Colton soils. Fernlake soils typically have more rock fragments than Adams soils.

Typical pedon of Fernlake cobbly loamy sand, gently sloping, very bouldery, in the Town of Black Brook, 0.5 mile northeast on Fern Lake Road fron the intersection with Guide Board Road, on a five percent slope in a stony wooded area just east of road; USGS Ausable Forks topographic quadrangle, lat. 44 degrees, 28 minutes, 22 seconds N. and long. 73 degrees, 43 minutes, 8 seconds W., NAD 1927:

Oi—0 to 1 inch; dark reddish brown (5YR 2/2) fibric material; very friable; many fine and medium roots; abrupt smooth boundary.

A—1 to 2 inch; black (5YR 2/1) cobbly loamy sand; weak medium granular structure; very friable; many fine and common medium roots throughout; many very fine interstitial and few very fine and fine tubular pores; 5 percent pebbles, 10 percent cobbles, very strongly acid; abrupt wavy boundary.

E—2 to 3 inches; 50 percent reddish gray (5YR 5/2) and 50 percent brown (7.5YR 5/2) cobbly loamy sand; weak very fine and fine granular structure; very friable; many fine and common medium roots; many very fine interstitial and few very fine and

fine tubular pores; patchy faint clay films on sand and gravel; 5 percent pebbles, 10 percent cobbles; extremely acid; abrupt broken boundary.

Bs1—3 to 5 inches; reddish brown (5YR 4/3) cobbly loamy sand; weak medium granular structure; very friable; many fine and common medium roots; many very fine interstitial and few very fine and fine tubular pores; continuous faint iron stains on sand and gravel; 5 percent pebbles, 10 percent cobbles; extremely acid; abrupt wavy boundary.

Bs2—5 to 11 inches; brown (7.5YR 4/4) cobbly loamy sand; weak fine subangular blocky structure parting to weak fine granular; very friable; many fine and common medium roots; many very fine interstitial and few very fine and fine tubular pores; continuous faint iron stains on sand and gravel; 5 percent pebbles, 15 percent cobbles; strongly acid; clear wavy boundary.

BC1—11 to 17 inches; strong brown (7.5YR 4/6) cobbly loamy sand; weak medium subangular blocky structure parting to weak fine granular; very friable; common medium roots; many very fine interstitial and very fine tubular pores; continuous faint iron stains on sand and gravel; 5 percent pebbles, 15 percent cobbles; strongly acid; clear wavy boundary.

BC2—17 to 21 inches; dark yellowish brown (10YR 4/4) cobbly loamy sand; weak medium subangular blocky structure; friable; few fine and medium roots; many very fine interstitial and few very fine tubular pores; patchy faint iron stains on sand and gravel; 5 percent pebbles, 15 percent cobbles; strongly acid; clear wavy boundary.

BC3—21 to 33 inches; mixed 70percent grayish brown (10YR 5/2) and 30percent brown (10YR 5/3) cobbly loamy sand; weak medium subangular blocky structure parting to weak fine subangular blocky; friable; few fine and medium roots; many very fine interstitial and few very fine tubular pores; patchy faint iron stains on sand and gravel; 5 percent pebbles, 15 percent cobbles; strongly acid; clear smooth boundary.

C—33 to 72 inches; grayish brown (10YR 5/2) gravelly loamy sand; massive; friable; few fine and medium roots in cracks; many very fine interstitial, and few fine interstitial and tubular pores; 15 percent pebbles, 5 percent cobbles; moderately acid.

The thickness of the solum ranges from 15 to 40 inches. Depth to bedrock is greater than 60 inches. Rock fragments range from 5 to 30 percent by volume in the surface and subsoil, and from 10 to 40 percent in the substratum.

Some pedons have thin O horizons.

The A horizon has hue of 5YR or 7.5YR, value of 2 or 3, and chroma of 1 or 2. Texture is dominantly loamy sand, but includes loamy fine sand and sandy loam in the fine earth fraction. Reaction is extremely acid to strongly acid.

The E horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 to 3. Texture is dominantly loamy sand, but includes loamy fine sand, and fine sand in the fine earth fraction. Reaction is extremely acid to strongly acid.

The Bs horizon has hue of 5YR to 10YR, value of 4 or 5, and chroma of 3 to 6. Texture is dominantly loamy sand; however, thin subhorizons of loamy fine sand or sandy loam are allowed in the fine earth fraction. Reaction is extremely acid to strongly acid.

The BC horizon has hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 2 to 6. Texture is dominantly loamy sand, but also includes loamy fine sand, sand or fine sand in the fine earth fraction. Reaction is very strongly acid to moderately acid.

The C horizon has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 2 or 3. Texture is dominantly loamy sand, but includes loamy fine sand, sand or fine sand in the fine earth fraction. Some pedons have thin subhorizons of sandy loam below 40 inches. Reaction is strongly acid to slightly acid.

Flackville Series

Flackville series consists of very deep, moderately well drained soils on lake plains, and in areas between upland till ridges. These soils were formed in a sandy mantle over clayey marine or lacustrine sediments. Slopes range from 0 to 8 percent.

Flackville soils are commonly on landscapes adjacent to Bombay, Kalurah, Swanton, Pinconning, Muskellunge, and Sciota soils. Flackville soils were formed in sand overlying clay whereas Bombay and Kalurah soils are formed in loamy till deposits. Flackville soils have less redox iron depletions in the subsoil than somewhat poorly drained Swanton soils and very poorly drained Pinconning soils. The Flackville soils differ from Muskellunge soils in having sandier textured sediments overlying clayey sediments. The Flackville soils have thinner sand deposits over silt and clay than the somewhat poorly drained Sciota soils which are very deep sand.

Typical pedon of Flackville loamy fine sand, 3 to 8 percent slopes, in the Town of Chazy, about 330 feet west of Ashley Road and 160 feet south of Recore Road in a hayfield; USGS Beekmantown topographic quadrangle, lat. 44 degrees 50 minutes 8 seconds N. and long. 73 degrees 28 minutes 28 seconds W., NAD 1927:

Ap—0 to 12 inches, very dark grayish brown (10YR 3/2) loamy fine sand; weak fine subangular blocky structure parting to weak fine and very fine granular; very friable; many very fine, common fine and medium, and few coarse roots; 2 percent gravel; slightly acid (limed soil); abrupt smooth boundary.

E—12 to 14 inches, light brownish gray (10YR 6/2) fine sand; weak medium platy structure; friable; many very fine, common fine, and few medium roots; 1 percent rock fragments; neutral (limed soil); abrupt broken boundary.

Bhs—14 to 16 inches, dark brown (7.5YR 3/3) sand; very weak medium subangular blocky structure; friable (firm in place); many very fine, common fine, and few medium roots; 5 percent very fine gravel; neutral (limed soil); clear wavy boundary.

Bs—16 to 22 inches, brown (7.5YR 4/3) sand; weak medium and fine subangular blocky structure; very friable; many very fine; common fine, and few medium roots; 10 percent very fine gravel; neutral (limed soil); abrupt wavy boundary.

BC—22 to 26 inches, pale brown (10YR 6/3) loamy fine sand; weak medium platy structure; friable; common fine and very fine, and few medium roots; common fine and very fine pores; common coarse and medium dark yellowish brown (10YR 4/6) soft masses of iron oxides and common coarse faint light brownish gray (10YR 6/2) areas of iron depletion; 1 percent gravel; neutral; abrupt smooth boundary.

2BC—26 to 35 inches, dark grayish brown (2.5Y 4/2) silty clay; very weak coarse prismatic structure parting to weak medium and fine angular blocky; firm; common very fine, and few medium and fine roots; few fine and very fine pores; grayish brown (2.5Y 5/2) face of prisms; many fine and medium yellowish brown (10YR 5/6) and dark yellowish brown (10YR 4/4) masses of iron oxides; neutral; clear smooth boundary.

2Cg1—35 to 48 inches, dark grayish brown (2.5Y 4/2) silty clay; massive with weak medium and thick plate-like divisions and with few vertical separation cracks (grayish brown (2.5Y 5/2) face); firm; few very fine and fine roots; common fine and very fine, and few medium pores; many fine distinct dark yellowish brown (10YR 4/4) masses of iron oxides and light gray (10YR 7/2) areas of iron depletion; less than 1 percent rock fragments; neutral; clear smooth boundary.

2Cg2—48 to 72 inches, grayish brown (2.5Y 5/2) silty clay; massive; very firm; common fine distinct dark yellowish brown (10YR 4/4) masses of iron oxides and light gray (10YR 7/2) areas of iron depletion; less than 1 percent rock fragments; slightly alkaline, (slightly effervescence at 70 inches).

The thickness of the solum and depth to the underlying fine-textured material range from 20 to 40 inches. Redoximorphic features occur within 30 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments range up to 10 percent fine gravel.

The A or Ap horizon has hue of 7.5YR or 10YR, value of 3 or 4, and chroma of 2 or 3. It is fine sandy loam, sandy loam, loamy fine sand, fine sand, or sand in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid unless limed.

The Bh or Bhs is neutral or has hue of 5YR or 7.5YR, value of 1 to 3, and chroma of 0 to 2. It is loamy fine sand, fine sand, or sand in the fine earth fraction. Unless limed, reaction ranges from very strongly acid to moderately acid.

The Bs horizon has hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 3 to 6. It is loamy fine sand, fine sand, or sand in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The BC horizon, if present, has hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 1 to 4. It is loamy fine sand, fine sand or sand in the fine earth fraction. Reaction ranges from from strongly acid to neutral.

The 2BC, if present, has hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 1 to 4. It is silty clay loam or silty clay in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The 2C horizon has hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 1 to 5. It is silty clay loam, silty clay, or clay in the fine earth fraction. Free carbonates are in many pedons. Reaction ranges from neutral to moderately alkaline.

Fluvaquents

Fluvaquents consist of very deep, somewhat poorly drained to poorly drained soils formed in material deposited by rivers and streams. Fluvaquents are on the most actively flooded areas of alluvial plains in the county. This unit is named above the series level of classification because of the variability of the soil properties and the composition of the material in which it formed. Slopes range from 0 to 3 percent.

Fluvaquents occur in a complex with well drained Udifluvents. They are commonly adjacent to Lovewell, Cornish, Medomak, Rumney, Adams and Colton soils on the landscape. Fluvaquents have soil profiles that vary in texture, whereas Lovewell, Cornish and Medomak soils have mainly silt loam and very fine sandy loam in the solum, and Rumney soils have mainly sandy loam or loam in the solum. Fluvaquents lack spodic development which is characteristic of Adams and Colton soils.

Fluvaquents are in that part of the floodplain where intermittent erosion and redeposition of sediments by the stream cause the composition and properties to differ from place to place. Because of the wide range of texture and other variabilities, a typical pedon of Fluvaquents is not provided.

Generally, the surface layer of these soils is 2 to 12 inches thick. The depth to bedrock is more than 60 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Rock fragments including gravel, channers, and cobbles range from 0 to 50 percent by volume.

The surface layer has hue of 10YR or 2.5Y, value of 1 to 3, and chroma of 0 to 2. Textures are generally sandy loam, loam, or silt loam in the fine earth fraction with or without mucky analogues. Reaction is strongly acid to slightly alkaline.

The substratum has hue of 10YR to 5Y, value of 3 to 6, and chroma of 3 or less. Texture is generally sandy loam, silt loam, loam, or silty clay loam in the fine earth fraction. Some pedons have thin strata of sand or loamy sand. Reaction is strongly acid to slightly alkaline.

Gardenisle Series

The Gardenisle series consists of moderately deep, well drained soils on argillite or limestone bedrock controlled lowlands. These soils formed in loamy glacial till. Slopes range from 0 to 25 percent.

The Gardenisle soils are near the Benson, Amenia, Massena, Northway, Kingsbury and Rhinebeck soils on the landscape. Gardenisle soils are slightly deeper to bedrock than the shallow Benson soils and very deep Amenia, Massena, Northway, Kingsbury and Rhinebeck soils. In addition, Gardenisle soils do not have as much sand in its subsoil as in Northway soils. Gardenisle soils have less clay than the Kingsbury and Rhinebeck soils.

Typical pedon of Gardenisle loam, in a Gardenisle-Benson complex, strongly sloping, rocky, in the Town of Plattsburgh, about 1.3 miles northwest of the NY-VT ferry dock parking lot and about 1,000 feet west of Cumberland Head Road in abandoned cropland reverting to brush; USGS Plattsburgh topographic quadrangle, lat. 44 degrees 43 minutes 1 second N. and long. 73 degrees 23 minutes 26 seconds W., NAD 1927:

Ap—0 to 5 inches, very dark grayish brown (10YR 3/2) loam; light brownish gray (10YR 6/2) dry; moderate fine granular structure; friable; many very fine, common fine, and few medium roots; 10 percent rock fragments; neutral; clear smooth boundary.

BE—5 to 9 inches, brown (10YR 4/3) loam; weak fine and medium subangular blocky structure parting to moderate fine granular; friable; many very fine, common fine, and few medium roots; 10 percent rock fragments; neutral; abrupt smooth boundary.

Bw—9 to 17 inches, brown (7.5YR 4/4) gravelly loam; weak medium subangular blocky structure parting to moderate fine and very fine subangular blocky; few thin clay films lining pores; friable; many very fine and few fine roots; many fine and very fine pores; 15 percent rock fragments; slighty effervescent, slightly alkaline; clear wavy boundary.

2C—17 to 24 inches, dark brown (10YR 3/3) very channery loam; massive; friable; few fine and very fine roots; common fine and very fine pores; common fine and medium distinct yellowish brown (10YR 5/4) streaks in the lower part; 45 percent rock fragments (including 10 percent greater than 3 inches); strongly effervescent, moderately alkaline; clear irregular boundary.

2Cr—24 to 34 inches, very dark gray (10YR 3/1) highly weathered argillite bedrock with silt loam occupying 20 percent of volume between rock layers; decomposing rock structure; firm; violently effervescent, moderately alkaline; gradual irregular boundary.

2R—34 inches, folded, gray (10YR 5/1 dry) argillite bedrock.

The thickness of the solum ranges from 15 to 40 inches. Carbonates occur within 6 inches of bedrock contact in most pedons. Depth to bedrock ranges from 20 to 40 inches. Rock fragments range from 5 to 25 percent by volume in the solum and from 10 to 50 percent in the substratum. The average rock fragment content less than 35 percent in the control section.

The Ap has hue of 10YR, value of 3 or 4 and chroma of 2 or 3. Some undisturbed A horizons have value and chroma one unit lower than Ap horizons. Texture is fine sandy loam or loam in the fine earth fraction, and less commonly silt loam. Reaction ranges from moderately acid to slightly alkaline.

The BE horizon has hue of 7.5YR or 10YR, value of 4 to 6 and chroma of 3 or 4. Texture is fine sandy loam or loam in the fine earth fraction. Reaction ranges from moderately acid to slightly alkaline.

The Bw horizon has hue of 7.5YR or 10YR, value of 3 or 4 and chroma of 4 to 6. Texture is loam or silt loam in the fine earth fraction. Reaction ranges from neutral to moderately alkaline.

The BC horizon, if present, has hue of 10YR or 2.5Y, value of 3 to 5 and chroma of 3 or 4. Texture is loam or silt loam in the fine earth fraction. Reaction ranges from neutral to moderately alkaline.

The C or 2C horizon has hue of 10YR or 2.5Y, value of 3 to 5 and chroma of 3 or 4. Texture is loam or silt loam in the fine earth fraction. Reaction ranges from neutral to moderately alkaline.

The 2Cr horizon, if present, has hue of 10YR to 5Y, value 3 to 5 and chroma of 1 to 4. Texture of the fine earth between weathered bedrock fragments is loam or silt loam.

Glebe Series

The Glebe series consists of moderately deep and deep, well drained soils on high elevation sideslopes of the Adirondack Mountains. These soils formed in loamy glacial till. Slope ranges from 15 to 70 percent.

The Glebe soils are on a landscape with the Skylight and Ricker soils. Glebe soils are moderately deep or deep to bedrock whereas the Skylight soils are very shallow and shallow. Glebe soils have more mineral soil material than the mainly organic Ricker soils.

Typical pedon of Glebe gravelly coarse sandy loam, in a Glebe-Skylight complex, 15 to 35 percent slopes, very rocky, in the Town of Wilmington, about 300 feet east of apex of the lower hairpin curve of Whiteface Memorial Highway, 50 feet north of upper leg of hairpin; lat. 44 degrees 22 minutes 10 seconds N. and long. 73 degrees 54 minutes 42 seconds W., NAD 1927:

Oa—0 to 1 inch, black (5YR 2.5/1) sapric material, 30 percent mineral; moderate fine granular structure; very friable; many very fine and fine, and few medium roots; extremely acid, abrupt wavy boundary.

Bh—1 to 12 inches, dark reddish brown (5YR 2.5/2) gravelly coarse sandy loam, weak medium and coarse subangular blocky structure; very friable, strongly smeary; many fine and very fine, common medium, and few coarse roots; 15 percent gravels, 5 percent cobbles, and 10 percent stones; very strongly acid, gradual wavy boundary.

Bhs—12 to 19 inches, dark brown (7.5YR 3/2) gravelly fine sandy loam; weak medium and coarse subangular blocky structure; friable, strongly smeary; common fine and few medium roots, 15 percent gravels, 10 percent cobbles, and 5 percent stones; very strongly acid; gradual wavy boundary.

BC—19 to 24 inches, brown (10YR 4/3) stony loamy coarse sand; weak medium subangular blocky structure; friable, slightly smeary; 15 percent stones, 5 percent cobbles, and 10 percent gravels; strongly acid; abrupt wavy boundary.

R—24 inches, whiteface anorthosite bedrock.

The thickness of the solum ranges from 14 to 38 inches. Depth to bedrock ranges from 20 to 60 inches. Rock fragments range from 5 to 35 percent by volume in the surface and subsoil, and from 10 to 40 percent in the substratum.

The O horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 0 to 2. It is sapric, hemic or fibric. Reaction ranges from extremely acid to strongly acid.

The A horizon, if present, has hue of 5YR to 10YR, value of 2 or 3, and chroma of 0 to 2. Texture ranges from silt loam, very fine sandy loam or fine sandy loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The E horizon, if present, has hue of 5YR to 10YR, value of 3 to 6, and chroma of 1 to 3. It is very fine sandy loam, fine sandy loam, sandy loam, loamy fine sand, or

loamy sand in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The Bh horizon has hue of 2.5YR to 7.5YR, value of 2 or 3, and chroma of 1 or 2. It is very fine sandy loam, fine sandy loam, sandy loam or coarse sandy loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The Bhs horizon has hue of 5YR to 10YR, value of 3 and chroma of 2 or 3. It is very fine sandy loam, fine sandy loam, sandy loam or coarse sandy loam in the fine-earth fraction. Reaction ranges from extremely acid to strongly acid.

The Bs horizon, if present, has hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 6. It is very fine sandy loam, fine sandy loam, sandy loam or coarse sandy loam in the fine-earth fraction. Reaction ranges from extremely acid to strongly acid.

The BC horizon has hue of 7.5YR to 2.5Y, value of 3 to 6 and chroma of 2 to 4. It is fine sandy loam, sandy loam, loamy fine sand, loamy sand or loamy coarse sand in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The C horizon, if present, has hue of 10YR to 5Y, value of 3 or 4, and chroma of 2 to 4. It is fine sandy loam, sandy loam, loamy fine sand, or loamy sand in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

Gougeville Series

The Gougeville series consists of very deep, poorly drained soils on lake plains and along delta perimeters. These soils formed in slightly depressional areas on sandy plains. Slopes range from 0 to 3 percent, but are dominantly 0 to 1 percent.

Gougeville soils are in a drainage sequence with the excessively drained Plainfield soils, moderately well drained Deerfield soils and the somewhat poorly drained Junius soils. Gougeville soils are also near the Pipestone, Northway, Massena and Markey soils. Gougeville soils do not have a reddish brown spodic horizon as in Pipestone soils. While Gougeville soils are sandy throughout the profile, somewhat poorly drained Northway soils are sandy soils overlying a loamy substratum within 40 inches deep. Gougeville soils also have a higher sand content than the loamy somewhat poorly drained Massena soils. Gougeville soils lack an organic mantle over sands which is characteristic of Markey soils.

Typical pedon of Gougeville mucky loamy fine sand, in the Town of Plattsburgh, about 2,400 feet east of State Route 22 and about 400 feet south of South Junction Road in a brushy meadow; USGS Plattsburgh topographic quadrangle, lat. 44 degrees 37 minutes 59 seconds N. and long. 73 degrees 28 minutes 47 seconds W., NAD 1927:

A—0 to 6 inches, very dark brown (10YR 2/2) mucky loamy fine sand, dark grayish brown (10YR 4/2) dry; weak fine granular structure; very friable; many very fine, and common fine and medium roots; moderately acid; clear smooth boundary.

Cg1—6 to 12 inches, light brownish gray (10YR 6/2) fine sand; single grain; loose; common very fine roots and few fine roots; many medium and coarse prominent strong brown (7.5YR 4/6) soft masses of iron oxides (some slightly firm orstein), common black (N 2/0) stains of manganese oxides, few yellowish brown (10YR 5/6) iron stains along root channels; moderately acid; abrupt smooth boundary.

Cg2—12 to 25 inches, grayish brown (10YR 5/2) fine sand; single grain; very friable; few very fine roots; many coarse and medium distinct dark yellowish brown (10YR 4/6) and prominent strong brown (7.5YR 4/6) soft masses of iron oxides, and common coarse distinct gray (10YR 6/1) areas of iron depletion; moderately acid; gradual smooth boundary.

Cg3—25 to 40 inches, grayish brown (10YR 5/2) fine sand; single grain; very friable; common coarse and medium distinct yellowish brown (10YR 5/6) and common coarse faint yellowish brown (10YR 5/4) soft masses of iron oxides, and common

coarse and medium distinct gray (10YR 6/1) areas of iron depletion; moderately acid; clear smooth boundary.

Cg4—40 to 58 inches, gray (10YR 5/1) fine sand; single grain; very friable; common coarse prominent light olive brown (2.5Y 5/4) soft masses of iron oxides; slightly acid; clear smooth boundary.

Cg5—58 to 72 inches, dark gray (N 4/0) fine sand; single grain; loose; slightly alkaline.

The thickness of the solum ranges 6 to 25 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments are typically absent, but may range up to 2 percent by volume in the substratum.

The Ap horizon has hue of 10YR, value of 2 or 3 and chroma of 1 or 2. The A horizon in uncultivated areas has value or chroma one-unit lower than an Ap horizon. Texture is fine sand, loamy fine sand or fine sandy loam with or without mucky analogues. Reaction ranges from strongly acid to slightly acid.

Some pedons have a Bg horizon with a hue of 10YR to 5Y (or is neutral), value of 4 to 6, and chroma of 0 to 2. Texture is fine sand or loamy fine sand in the fine earth fraction. Reaction is moderately acid to slightly alkaline.

The Cg horizon has hue of 10YR to 5Y (or is neutral), value of 3 to 6, and chroma of 0 to 2. Texture above a depth of 40 inches is fine sand or loamy fine sand. Below 40 inches, some pedons have thin subhorizons of loamy very fine sand, very fine sandy loam and silt loam. Reaction is moderately acid to slightly alkaline.

Grattan Series

The Grattan series consists of very deep, excessively drained soils on lake plains, terraces, and deltas. These soils formed in sandy deposits. Slopes range from 0 to 8 percent.

Grattan soils are in a drainage sequence with the moderately well drained Covert soils, and the somewhat poorly drained Pipestone soils. Grattan soils occur on the landscape near the Colton, Northway, Amenia, Bombay and Massena soils. Grattan soils have few rock fragments whereas Colton soils are very gravelly. The Grattan soils do not have contrasting textures like Northway soils which are sandy over loamy. Gratten soils are sandier than the Amenia, Bombay, and Massena soils which are formed in loamy glacial till material.

Typical pedon of Grattan loamy sand, 0 to 3 percent slopes, in Town of Plattsburgh, about 1300 feet southwest of the intersection of New York Road with Connecticut Road, and about 825 feet northwest of New York Road, in a woodlot; USGS Plattsburgh topographic quadrangle, lat. 44 degrees 40 minutes 13 seconds N. and long. 73 degrees 27 minutes 28 seconds W., NAD 1927:

Oe—0 to 3 inches, black (10YR 2/1) hemic material; very friable; common medium, fine and very fine roots; abrupt smooth boundary.

A—3 to 5 inches; very dark grayish brown (10YR 3/2) loamy sand; weak fine granular structure; very friable; common medium, fine, and very fine roots; few medium, and common fine and very fine pores; strongly acid; abrupt smooth boundary.

E—5 to 11 inches; gray (10YR 5/1) sand; single grain; loose; common fine and very fine roots; few medium, and common fine and very fine pores; strongly acid; abrupt smooth boundary.

Bs1—11 to 20 inches; strong brown (7.5YR 4/6) loamy sand; weak fine subangular blocky structure; very friable; common fine and very fine roots; common fine and very fine pores; strongly acid; clear smooth boundary.

Bs2—20 to 30 inches; strong brown (7.5YR 5/6) loamy sand; weak fine subangular blocky structure; very friable; common fine and very fine roots; common fine and very fine pores; strongly acid; clear smooth boundary.

BC—30 to 41 inches; yellowish brown (10YR 5/6) sand; single grain; loose; few fine and very fine roots; common fine and very fine pores; 1 percent rock fragments; moderately acid; gradual smooth boundary.

C—41 to 72 inches; yellowish brown (10YR 5/4) sand; single grain; loose; few very fine roots; few medium, and common fine and very fine pores; moderately acid.

The thickness of the solum ranges from 20 to 50 inches. Depth to bedrock is greater than 60 inches. Rock fragments range from 0 to 5 percent throughout the soil.

The O horizon, if present, has hue of 5YR to 10YR, value of 2 or 3 and chroma of 0 or 1.

The A or Ap horizon, where present, has hue of 7.5YR or 10YR, value of 2 to 4, and chroma of 1 to 3. It is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction is very strongly acid to slightly acid.

The E horizon has hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 1 or 2. It is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction is very strongly acid to slightly acid.

The Bhs horizon has hue of 5YR or 7.5YR, value of 3, and chroma of 2 or 3. It is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The Bs horizon has hue of 5YR to 10YR, value of 4 to 7, and chroma of 4 to 8. It is loamy fine sand, fine sand, loamy sand or sand in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The BC horizon has hue of 7.5YR or 10YR, value of 5 or 6 and chroma of 4 to 7. It ranges from fine sand to coarse sand in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The C horizon has hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 3 to 6. It is sand or coarse sand in the fine earth fraction. Reaction ranges from moderately acid to neutral.

Grenville Series

The Grenville series consists of very deep, well drained soils on lowlands. These soils formed in loamy, high lime, glacial till deposits. Slopes range from 3 to 15 percent.

The Grenville soils are in a drainage sequence with moderately well drained Hogansburg soils, somewhat poorly drained Malone soils, and very poorly drained Runeberg soils. Grenville soils are also near the Neckrock and Muskellunge soils in the landscape. The Grenville soils are very deep and Neckrock soils are 20 to 40 inches deep to bedrock. Grenville soils lack redoximorphic features and have less clay than is characteristic of Muskellunge soils.

Typical pedon of Grenville loam, 3 to 8 percent slopes, in the Town of Chazy, 700 feet north of County Route 23 (Old Route 191) and 3080 feet west of Lakeshore Road in a field; USGS Champlain topographic quadrangle, lat. 44 degrees 53 minutes 15 seconds N. and long. 73 degrees 23 minutes 25 seconds W., NAD 1927:

Ap—0 to 9 inches, dark brown (10YR 3/3) loam; moderate medium granular structure; very friable; many fine roots; 5 percent rock fragments; slightly acid; abrupt smooth boundary.

Bw1—9 to 12 inches, brown (10YR 4/3) loam; moderate medium subangular blocky structure; very friable; common fine roots; 10 percent rock fragments; slightly acid; gradual smooth boundary.

Bw2—12 to 17 inches, dark yellowish brown (10YR 4/4) loam; moderate fine and medium subangular blocky structure; very friable; few fine roots; 10 percent rock fragments; neutral; gradual smooth boundary.

C—17 to 35 inches, brown (10YR 4/3) gravelly fine sandy loam; massive; friable; few

fine roots; 20 percent rock fragments; moderately alkaline, strongly effervescent; clear smooth boundary.

Cd—35 to 72 inches, brown (10YR 4/3) gravelly fine sandy loam; massive; firm; common medium distinct gray (10YR 5/1) mottles; 20 percent rock fragments; moderately alkaline, strongly effervescent.

The thickness of the solum and the depth to carbonates range from 17 to 40 inches. Rock fragments range from 5 to 30 percent by volume in the surface, 5 to 35 percent in the subsoil, and from 15 to 40 percent in the substratum.

The A horizon has hue of 10YR, value of 2 to 4, and chroma of 2 or 3. It is silt loam, loam, or fine sandy loam in the fine earth fraction. Reaction ranges from strongly acid to slightly acid.

The Bw horizon has hue of 5YR to 10YR, value of 3 to 5, and chroma of 3 to 6. It is fine sandy loam or loam in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The BC horizon, if present, has hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 2 or 3. It is fine sandy loam or loam in the fine earth fraction. Reaction is neutral or slightly alkaline.

The C horizon has hue of 7.5YR to 2.5Y, value of 3 to 5 and chroma of 2 to 3. It is fine sandy loam or loam in the fine earth fraction. Reaction is slightly alkaline or moderately alkaline and it is calcareous.

Hailesboro Series

The Hailesboro series consists of very deep, somewhat poorly drained soils on glacial lake plains. These soils formed in silt loam and silty clay loam lacustrine or marine deposits. Slopes range from 0 to 8 percent.

Hailesboro soils are on landscapes near the Muskellunge, Adjidaumo, Roundabout, Flackville, Swanton, Hogansburg, Kalurah and Colosse soils. The Hailesboro soils do not have as much clay as the somewhat poorly drained Muskellunge soils and poorly drained Adjidaumo soils. Hailesboro soils are more clayey than the somewhat poorly drained Roundabout soils. The Hailesboro soils do not have contrasting layers as the sandy over clayey Flackville soils and the loamy over clayey Swanton soils. Hailesboro soils generally have few or no rock fragments in contrast to Kalurah and Colosse soils.

Typical pedon of Hailesboro silt loam, in the Town of Champlain, about 400 feet north of US Route 11, at a point 400 feet east of the intersection of Route 11 and US Route 9 in a pasture; USGS Champlain topographic quadrangle, lat. 44 degrees 58 minutes 16 seconds N. and long. 73 degrees 26 minutes 43 seconds W., NAD 1927:

Ap—0 to 9 inches, dark brown (10YR 3/3) silt loam; pale brown (10YR 6/3) dry; weak fine granular and thin platy structure; friable; many fine roots; moderately acid; abrupt smooth boundary.

BE—9 to 15 inches, brown (10YR 5/3) silt loam; moderate thin and medium platy structure; friable; common fine roots; few fine distinct dark yellowish brown (10YR 4/4) masses of iron oxides and grayish brown (10YR 5/2) areas of iron depletion; moderately acid; gradual smooth boundary.

Btg—15 to 30 inches, dark grayish brown (10YR 4/2) silty clay loam; weak thick platy structure parting to strong angular blocky; friable; few fine and medium roots; common distinct clay films on ped faces; common fine distinct dark yellowish brown (10YR 4/4) masses of iron oxides; moderately acid; gradual smooth boundary.

Cg1—30 to 38 inches, gray (10YR 5/1) silt loam; weak medium subangular blocky structure; firm; common medium prominent yellowish brown (10YR 5/6) masses of iron oxides; slightly acid; gradual smooth boundary.

Cg2—38 to 72 inches, dark grayish brown (10YR 4/2) silty clay loam; moderate coarse angular blocky structure; firm; gray (10YR 5/1) faces of peds; neutral.

The thickness of the solum ranges from 22 to 45 inches. Depth to carbonates ranges from 30 to 80 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments range from 0 to 5 percent by volume throughout the soil.

The A or Ap horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 1 to 3. It is silt loam or very fine sandy loam in the fine earth fraction. Reaction is moderately acid to neutral.

The BE horizon has hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 1 to 3. It is silt loam or very fine sandy loam in the fine earth fraction. Reaction is moderately acid to slightly alkaline.

The Bt horizon has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 1 or 2. It is dominantly silt loam or silty clay loam in the fine earth fraction, with thin subhorizons of very fine sandy loam. Reaction ranges from moderately acid to slightly alkaline.

The BC horizon has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 1 to 3. It is very fine sandy loam, silt loam or silty clay loam in the fine earth fraction. Reaction ranges from neutral to moderately alkaline.

The C horizon has hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 2 or 3. It is very fine sandy loam, silt loam, silty clay loam, or silty clay in the fine earth fraction. Reaction is neutral to moderately alkaline.

Hermon Series

The Hermon series consists of very deep, somewhat excessively drained soils on ridges, valley sides and upland glacial till plains. These soils formed in sandy and gravelly, ablation till. Slopes range from 0 to 60 percent.

Hermon soils are near the Colton, Adams, Fernlake, Monadnock, Bice and Schroon soils on the landscape. The Hermon soils are similar to the Colton soils except that rock fragments in the substratum of Hermon soils tend to be coated with silt and not stratified to any degree. The Hermon soils have more rock fragments throughout the profile than the Adams, Fernlake, Monadnock, Bice and Schroon soils. Also, Hermon soils have less clay and silt than the loamy subsoil of Monadnock, Bice and Schroon soils.

Typical pedon of Hermon fine sandy loam, in a map unit of Hermon-Adirondack complex, strongly sloping, very bouldery, in the Town of Saranac, about 2.7 miles south of Standish on Standish Road, then 1,100 feet northeast of Standish Road on a jeep trail; USGS Lyon Mountain topographic quadrangle, lat. 44 degrees 39 minutes 13 seconds N. and long. 73 degrees 56 minutes 22 seconds W., NAD 1927:

A—0 to 2 inches, black (10YR 2/1) fine sandy loam; weak very fine granular structure; very friable; many very fine and fine, and common medium roots; 7 percent rock fragments; extremely acid; abrupt wavy boundary.

E—2 to 6 inches, reddish gray (5YR 5/2) fine sandy loam; weak medium and fine subangular blocky structure; very friable; common very fine and fine, and few medium roots; 7 percent rock fragments; very strongly acid; abrupt wavy boundary.

Bhs—6 to 10 inches, dark brown (7.5YR 3/2) fine sandy loam; weak medium and coarse subangular blocky structure; very friable; many very fine and fine, common medium, and few coarse roots; 13 percent rock fragments; strongly acid; clear wavy boundary.

Bs—10 to 28 inches, strong brown (7.5YR 4/6) very gravelly loamy sand; weak medium and coarse subangular blocky structure; very friable; common very fine and fine roots; 40 percent rock fragments; strongly acid; clear wavy boundary.

BC—28 to 37 inches, dark yellowish brown (10YR 4/4) very cobbly loamy sand;

moderate medium subangular blocky structure; firm (discontinuous cementation); few very fine and fine roots; 40 percent rock fragments; strongly acid; abrupt wavy boundary.

C1—37 to 54 inches, brown (10YR 4/3) very cobbly loamy sand; massive; firm; 40 percent rock fragments; strongly acid; clear wavy boundary.

C2—54 to 72 inches, brown (10YR 5/3) cobbly loamy sand; single grain; very friable; 20 percent rock fragments; strongly acid.

The thickness of the solum ranges from 14 to 35 inches. Depth to bedrock is greater than 60 inches. Rock fragments in the upper 10 inches range from 5 to 50 percent by volume. Rock fragments range from 35 to 65 percent by volume in control section (weighted average), but individual horizons may range from 15 to 70 percent.

The A horizon has hue of 10YR, value of 2 or 3, and chroma of 1 to 3. Texture is fine sandy loam, sandy loam, and coarse sandy loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The E horizon has hue of 5YR to 2.5Y, value of 5 to 7, and chroma of 1 or 2. Texture is fine sandy loam, sandy loam, and coarse sandy loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The Bhs horizon has hue of 2.5YR to 7.5YR, value of 2 or 3, and chroma of 1 to 3. Texture is fine sandy loam, sandy loam, coarse sandy loam, loamy sand, loamy coarse sand, sand or coarse sand in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Bs horizon has hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 4 to 8. Texture is fine sandy loam, sandy loam, coarse sandy loam, loamy sand, loamy coarse sand, sand or coarse sand in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The BC horizon has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 3 to 6. Texture is sandy loam, coarse sandy loam, loamy sand, loamy coarse sand, sand or coarse sand in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The C horizon has hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 to 4. Texture is loamy sand, loamy coarse sand, sand or coarse sand. Reaction is strongly acid or moderately acid.

Heuvelton Series

The Heuvelton series consists of very deep, moderately well drained soils on gently sloping and dissected glacial lake plains. These soils formed in lacustrine and marine silt and clay deposits. Slopes range from 3 to 25 percent.

The Heuvelton soils are in a drainage sequence with the somewhat poorly drained Muskellunge soils, and the poorly drained and very poorly drained Adjidaumo soils. Heuvelton soils are also near the Grenville, Hogansburg, Malone, Swanton and Neckrock soils. Heuvelton soils have more clay in the subsoil and substratum than Grenville, Hogansburg and Malone soils. The Heuvelton soils lack a coarse loamy subsoil as is characteristic of Swanton soils. Heuvelton soils are very deep to limestone bedrock compared to moderately deep Neckrock soils.

Typical pedon of Heuvelton silty clay loam, 3 to 8 percent slopes, in the Town of Champlain, about 2,400 feet east of intersection of Mason Road with NY Route 9B, and about 750 feet south of NY Rt. 9B; USGS Champlain topographic quadrangle, lat. 44 degrees 56 minutes 21 seconds N. and long. 73 degrees 24 minutes 2 seconds W., NAD 1927:

Ap—0 to 6 inches, dark brown (10YR 3/3) silty clay loam; weak medium subangular blocky structure parting to moderate medium granular; friable; many fine and very fine roots; less than 1 percent rock fragments; neutral; abrupt smooth boundary.

BE—6 to 10 inches, brown (10YR 4/3) silty clay loam; moderate fine and medium subangular blocky structure parting to moderate medium granular; friable; many fine and very fine roots; neutral; abrupt smooth boundary.

Bt1—10 to 18 inches, brown (10YR 5/3) silty clay; moderate fine angular blocky structure; firm; common very fine roots; common thin discontinuous clay skins on faces of peds and lining pores; moderately acid; clear smooth boundary.

Bt2—18 to 22 inches, brown (10YR 5/3) silty clay; moderate fine angular blocky structure; firm; common very fine roots; common thin discontinuous clay skins on faces of peds and lining pores; few medium distinct gray (10YR 5/1) areas of iron depletion, and common fine distinct dark yellowish brown (10YR 4/4) masses of iron oxides; moderately acid; gradual smooth boundary.

Bt3—22 to 32 inches, grayish brown (10YR 5/2) silty clay; strong fine angular blocky structure; firm; few very fine roots; common thin discontinuous clay skins on faces of peds; many fine and medium distinct dark yellowish brown (10YR 4/6) masses of iron oxides; slightly acid; clear smooth boundary.

BC—32 to 39 inches, dark grayish brown (2.5Y 4/2) clay; strong medium and fine angular blocky structure; very firm; few very fine roots; many medium and fine distinct dark yellowish brown (10YR 4/6), and few fine distinct yellowish brown (10YR 5/6) masses of iron oxides; 1 percent rock fragments; neutral; clear smooth boundary.

Cg—39 to 72 inches, dark gray (5Y 4/1); clay; massive; very firm; few fine distinct light olive brown (2.5Y 5/4), and few medium distinct dark yellowish brown (10YR 4/6) masses of iron oxides; slightly alkaline, (strongly effervescent at 57 inches).

The thickness of the solum ranges from 20 to 40 inches. Depth of carbonates ranges from 20 to 70 inches. Redoximorphic features occur within 30 inches of the mineral soil surface. Rock fragments range from 0 to 25 percent in surface and subsurface horizons, and from 0 to 10 percent below.

The A horizon has hue of 7.5YR to 2.5Y, value of 2 to 4, and chroma of 1 to 3. It is silt loam, silty clay loam or silty clay in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The BE horizon has hue of 7.5YR to 5Y, value of 3 to 6, and chroma of 2 to 4. It is silty clay loam, silty clay or clay in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The E horizon, where present, has hue of 7.5YR to 5Y, value of 5 or 6, and chroma of 2 or 3. It is very fine sandy loam, silt loam or silty clay loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The B/E or E/B horizon, where present, has hue of 7.5YR to 5Y, value of 3 to 6, and chroma of 2 to 4. It is silty clay loam, silty clay or clay in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The Bt horizon has hue of 7.5YR to 5Y, value of 3 to 6, and chroma of 2 to 4. In pedons with matrix colors in chroma of 2, the color is lithochromic and not evidence of an aquic moisture regime. It is silty clay loam, silty clay or clay in the fine earth fraction. Reaction ranges from moderately acid to slightly alkaline.

The BC horizon has hue of 7.5YR to 5Y, value of 3 to 6, and chroma of 2 to 4. It is silty clay loam, silty clay or clay in the fine earth fraction. Reaction ranges from moderately acid to slightly alkaline.

The C horizon has hue of 5YR to 5Y, value of 3 to 5, and chroma of 1 to 4. It is silty clay loam, silty clay or clay in the fine earth fraction, or it is varved with texture ranging from clay to silt loam with fine sand and very fine sand in varves. Reaction ranges from neutral to moderately alkaline.

Hogansburg Series

The Hogansburg series consists of very deep, moderately well drained soils on upland glacial till plains. They formed in loamy, calcareous deposits derived mainly from limestone or dolomitic limestone. Slopes range from 0 to 8 percent.

The Hogansburg soils are in a drainage sequence with well drained Grenville soils, somewhat poorly drained Malone soils, and very poorly drained Runeberg soils on the landscape. The Hogansburg soils are commonly adjacent to Fahey, Coveytown, Muskellunge and Neckrock soils on the landscape. Hogansburg soils have less rock fragments than the Fahey soils and less sand than in the solum of Coveytown soils. The Hogansburg soils have less clay than somewhat poorly drained Muskellunge soils. Hogansburg soils are deeper to bedrock than the moderately deep Neckrock soils.

Typical pedon of Hogansburg loam, 3 to 8 percent slopes, in the Town of Chazy, about 75 feet west of the Stetson Road at a point 2,600 feet south of the intersection of North Farm Road and the Stetson Road in a cornfield; USGS Champlain topographic quadrangle, lat. 44 degrees 53 minutes 20 seconds N. and long. 73 degrees 24 minutes 59 seconds W., NAD 1927:

Ap—0 to 10 inches; very dark grayish brown (10YR 3/2) loam; light brownish gray (10YR 6/2) dry; moderate medium and fine granular structure; very friable; common medium and fine roots; 5 percent rock fragments; neutral; abrupt smooth boundary.

Bw—10 to 15 inches; brown (10YR 4/3) loam; moderate medium subangular blocky structure; very friable; common very fine and fine roots; 5 percent rock fragments; slightly alkaline; slightly effervescent; clear smooth boundary.

BC—15 to 19 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium and fine subangular blocky structure; very friable; common fine roots; few fine distinct light olive brown (2.5Y 5/6) masses of iron oxides; 10 percent rock fragments; moderately alkaline; violently effervescent; clear smooth boundary.

C—19 to 35 inches; brown (10YR 5/3) gravelly loam; moderate medium platy structure; friable; few fine roots in the upper part; many coarse prominent light gray (10YR 6/1) areas of iron depletion oriented linearly along plates, and common fine distinct light olive brown (2.5Y 5/6) masses of iron oxides; 15 percent rock fragments; moderately alkaline; violently effervescent; clear wavy boundary.

Cd—35 to 72 inches; brown (10YR 5/3) gravelly loam; moderate medium platy structure; firm; few fine faint dark yellowish brown (10YR 4/6) masses of iron oxides and few coarse faint grayish brown (10YR 5/2) areas of iron depletion; 20 percent rock fragments (including 5 percent cobbles); moderately alkaline; violently effervescent.

The thickness of the solum ranges from 18 to 34 inches. Depth to carbonates ranges from 10 to 33 inches. Redoximorphic features occur within 30 inches of the mineral soil surface. Rock fragments range from 3 to 35 percent by volume in the surface, 5 to 35 percent in the subsoil, and 15 to 40 percent in the substratum.

The Ap horizon has hue of 7.5YR or 10YR, value of 3 or 4, and chroma of 2 or 3. Texture is silt loam, loam, or fine sandy loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The Bw horizon has hue of 5YR to 2.5Y, value of 4 or 5, and chroma of 3 or 4. Texture is silt loam, loam or fine sandy loam in the fine earth fraction. Reaction ranges from strongly acid to slightly alkaline.

The BC horizon has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 2 to 4. Texture is silt loam, loam or fine sandy loam in the fine earth fraction. Reaction ranges from strongly acid to moderately alkaline.

The C or Cd horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 2 or 3. Texture is loam or fine sandy loam in the fine earth fraction. Reaction is slightly alkaline or moderately alkaline.

Hogback Series

The Hogback series consists of shallow, well drained soils on high elevation ridges and hillsides. These soils formed in loamy glacial till over crystalline bedrock. Slopes range from 3 to 60 percent.

Hogback soils are on landscapes near the Rawsonville, Ricker, Mundalite and Worden soils. Hogback soils have thinner deposits over bedrock than moderately deep Rawsonville soils. Hogback soils are dominantly mineral while the Ricker soils are dominantly organic deposits. In addition to be shallower to bedrock, Hogback soils also lack a dense substratum which is characteristic of Mundalite soils. Hogback soils do not redoximorphic features as in the somewhat poorly drained Worden soils.

Typical pedon of Hogback loamy fine sand (mixed), in a map unit of Hogback-Ricker complex, 35 to 60 percent slopes, very rocky, in the town of Dannemora, 2.1 miles south of the intersection of State Route 374 and Chazy Lake Road, and 1.3 miles west of the southern tip of Chazy Lake, in a wooded area; USGS Moffitsville topographic quadrangle, lat. 44 degrees 43 minutes 9 seconds N. and long. 73 degrees 50 minutes 41 seconds W., NAD 1927:

A—0 to 1 inch, black (10YR 2/1) fine sandy loam; weak fine subangular blocky structure parting to weak fine and very fine granular; very friable; many very fine, fine, and medium, and few coarse roots; 10 percent rock fragments; extremely acid; clear wavy boundary.

E—1 to 6 inches, reddish gray (5YR 5/2) loamy fine sand; very weak fine subangular blocky structure; very friable; common medium and fine, and few coarse roots; 5 percent gravel, 5 percent cobbles; very strongly acid; clear wavy boundary.

Bh—6 to 11 inches, black (5YR 2.5/1) fine sandy loam; weak fine and medium subangular blocky structure; very friable; many fine and common medium roots; 5 percent gravel, 5 percent cobbles; very strongly acid; clear wavy boundary.

Bhs—11 to 14 inches, dark reddish brown (5YR 3/3) gravelly fine sandy loam; weak fine and medium subangular blocky structure; friable; many fine and few medium roots; 10 percent gravel, 5 percent cobbles; very strongly acid; abrupt wavy boundary.

R—14 inches, massive, crystalline bedrock (anorthesite)

The thickness of the solum and depth to bedrock range from 10 to 20 inches. The spodic horizon is more than 8 inches thick. Rock fragments are mostly pebbles and cobbles and range from 5 to 35 percent throughout the soil.

The A horizon, if present, has hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 or 2. It is fine sandy loam or loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The E horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 or 2. It is loam, fine sandy loam, sandy loam or loamy fine sand in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The Bh horizon has hue of 2.5YR to 7.5YR (or it is neutral), value of 2 or 3, and chroma of 0 to 2. It is sandy loam, fine sandy loam or loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The Bhs horizon has hue of 2.5YR to 7.5YR, with value and chroma of 3. It is sandy loam, fine sandy loam or loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

Some pedons have a Bs horizon with hue of 2.5YR to 7.5YR, with value and chroma of 4 to 6. It is sandy loam, fine sandy loam or loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid. Some pedons are moderately acid near the bedrock.

Irona Series

The Irona series are shallow, well drained soils on glaciated uplands. These soils formed in a thin mantle of loamy glacial till over sandstone bedrock. Slopes range from 0 to 15 percent.

The Irona soils are in a drainage sequence with the somewhat poorly drained

Topknot soils. Irona soils are also associated in the landscape with the Chazy, Colosse, Conic, Peasleeville, Schroon and Sunapee soils. The Irona soils are shallow to bedrock compared to moderately deep Chazy and Conic soils. The shallow Irona soils occur near very deep Peasleeville, Schroon and Sunapee soils. Irona soils also have less rock fragments than very deep Colosse soils.

Typical pedon of Irona fine sandy loam, within a map unit of Irona-Conic complex, gently sloping, very rocky, in the Town of Altona, about 1.2 mile west of Woods Falls Road, and about 1,500 feet north of Irona Road in a pasture; USGS Altona topographic quadrangle, lat. 44 degrees 54 minutes 18 seconds N. and long. 73 degrees 40 minutes 32 seconds W., NAD 1927:

Ap—0 to 5 inches, dark brown (10YR 3/3) fine sandy loam, pale brown (10YR 6/3) dry; moderate fine granular structure; very friable; many fine and very fine roots; 5 percent rock fragments; strongly acid; clear smooth boundary.

Bw—5 to 13 inches, dark yellowish brown (10YR 3/4) fine sandy loam; weak medium and fine subangular blocky structure parting to moderate fine granular; very friable; common fine and very fine roots; few very fine tubular and many fine vesicular pores; 10 percent rock fragments; slightly acid; clear smooth boundary.

2C—13 to 18 inches, yellowish brown (10YR 5/4) sandy loam; massive with weak medium and thick plate-like divisions; friable (40 percent firm lenses); few fine roots; few very fine tubular and many fine vesicular pores; 10 percent rock fragments; moderately acid; abrupt smooth boundary.

2R—18 inches, light gray (10YR 7/2) unweathered, massive sandstone bedrock.

The thickness of the solum and depth to bedrock range from 10 to 20 inches. Rock fragments mainly sandstone, range from 2 to 25 percent by volume in the surface layer and from 5 to 35 percent in the subsoil and substratum.

The Ap horizon has hue of 7.5YR or 10YR, value of 3, and chroma of 2 or 3. Undisturbed A horizons have value of 2 or 3, and chroma of 1 to 3. Texture is fine sandy loam or loam in the fine earth fraction. Unless limed, reaction is strongly acid to slightly acid.

The Bw horizon has hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 3 to 6. Texture is mainly fine sandy loam or loam, and less commonly sandy loam in the fine earth fraction. Reaction is strongly acid to slightly acid.

The BC horizon, if present, has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 3 or 4. Texture is loam, fine sandy loam or sandy loam in the fine earth fraction. Reaction is strongly acid to slightly acid.

The C or 2C horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 3 to 6. Texture is sandy loam or fine sandy loam in the fine earth fraction. Pockets of loamy sand or loamy fine sand are also within the range. Reaction is strongly acid to slightly acid.

Junius Series

The Junius series consists of very deep, somewhat poorly drained soils on glacial lake plains. These soils formed in sandy deposits. Slopes range from 0 to 3 percent.

The Junius soils are in a drainage sequence with excessively drained Plainfield soils, moderately well drained Deerfield soils, and poorly drained Gougeville soils. Junius soils are also near the Pipestone, Northway, Shaker, Rhinebeck and Massena soils on the landscape. Junius soils lack the reddish brown subsoil characteristic of both Pipestone and Northway soils. Also, Junius soils consist of very deep sands whereas Northway soils have a loamy substratum within 40 inches of the surface. Junius soils have more sand and less clay than Shaker and Rhinebeck soils. The Junius soils generally lack rock fragments and have less silt and clay than the Massena soils.

Typical pedon of Junius fine sand, in the Town of Peru, about 1.2 miles west of U.S. Route 9 and 120 feet north of Rock Street in a hayfield; USGS Keeseville topographic quadrangle, lat. 44 degrees 36 minutes 24 seconds N. and long. 73 degrees 27 minutes 57 seconds W., NAD 1927:

Ap—0 to 9 inches, very dark grayish brown (10YR 3/2) fine sand; light brownish gray (10YR 6/2) dry; very weak medium subangular blocky structure parting to weak fine granular; very friable; many fine and very fine roots; common fine tubular pores; moderately acid; clear smooth boundary.

Bw1—9 to 18 inches, light olive brown (2.5Y 5/3) fine sand; very weak coarse subangular blocky structure; very friable; common very fine roots; common fine tubular pores; light brownish gray (2.5Y 6/2) faces of peds; common medium distinct yellowish brown (10YR 5/6) and dark yellowish brown (10YR 4/6) soft masses of iron oxides; neutral; gradual wavy boundary.

Bw2—18 to 29 inches, yellowish brown (10YR 5/4) fine sand; very weak coarse subangular blocky structure; very friable; few fine roots; common fine tubular pores; brown (10YR 5/3) faces of peds; common coarse distinct strong brown (7.5YR 5/6) and brown (7.5YR 4/4) soft masses of iron oxides, and few medium and coarse light brownish gray (10YR 6/2) areas of iron depletion in lower part; neutral; clear wavy boundary.

BCg—29 to 46 inches, light gray (10YR 6/1) fine sand; very weak very thick platy structure; very friable; light brownish gray (2.5Y 6/2) faces of peds; common coarse distinct yellowish brown (10YR 5/6) and strong brown (7.5YR 4/6) soft masses of iron oxides; slightly alkaline; clear wavy boundary.

Cg1—46 to 56 inches, gray (5Y 5/1) very fine sand and fine sand; massive; very friable; many medium and course prominent yellowish brown (10YR 5/6) soft masses of iron oxides; slightly alkaline; slightly effervescent; clear smooth boundary.

Cg2—56 to 59 inches, gray (10YR 5/1) loamy very fine sand with silt lenses; massive; very friable; common medium and course distinct brown (10YR 4/3) and dark yellowish brown (10YR 4/4) soft masses of iron oxides; moderately alkaline; strongly effervescent; clear smooth boundary.

Cg3—59 to 72 inches, dark gray (N 4/0) loamy very fine sand; massive; very friable; few medium distinct brown (10YR 5/3) soft masses of iron oxides; slightly alkaline; strongly effervescent.

The thickness of the solum ranges from 20 to 48 inches. Depth to carbonates ranges from 20 to 60 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments are typically absent, but fine gravel is present in the substratum of some pedons.

The A horizon has hue of 10YR or 2.5Y, value of 3 or 4 and chroma of 1 or 2. Texture is fine sand, loamy fine sand, or fine sandy loam in the fine earth fraction. Unless the soil is limed, reaction is moderately acid to neutral.

The Bw horizons have hue of 5YR to 2.5Y, value of 4 or 5 and chroma of 1 to 4. Texture is loamy fine sand or fine sand in the fine earth fraction. Reaction is slightly acid to slightly alkaline.

The BC horizon has hue of 5YR to 2.5Y, value of 4 or 5 and chroma of 1 to 4. It is loamy fine sand or fine sand in the fine earth fraction. Reaction is slightly acid to slightly alkaline.

The C horizons have hue of 7.5YR to 5Y (or it is neutral), value of 4 or 5 and chroma of 0 to 3. Texture is sand, fine sand, loamy fine sand, very fine sand or loamy very fine sand in the fine earth fraction, and is commonly stratified. Reaction is neutral to moderately alkaline.

Kalurah Series

The Kalurah series consists of very deep, moderately well drained soils on lowlands. These soils formed in loamy, medium lime, glacial till. Slopes range from 3 to 8 percent.

The Kalurah soils are on landscapes similar to the Bice, Chazy, Conic, Grenville, Malone, Runeberg soils. The Kalurah soils have redoximorphic features in the subsoil which are lacking in Bice and Grenville soils. Kalurah soils are deeper than 60 inches while Chazy and Conic soils are 20 to 40 inches deep to bedrock. The Kalurah soils do not have redoximorphic features within 20 inches of the mineral soil surface as the Malone and Runeberg soils.

Typical pedon of Kalurah fine sandy loam, 3 to 8 percent slopes, in the Town of Mooers, 0.6 mile north of North Star Road on Garrand Road (at 90 degree bend in road), then 870 feet north-northeast of bend, in a field; USGS Mooers topographic quadrangle, lat. 44 degrees 59 minutes 32 seconds N. and long. 73 degrees 36 minutes 11 seconds W., NAD 1927:

Ap—0 to 8 inches, very dark grayish brown (10YR 3/2) fine sandy loam; weak medium and fine granular structure; friable; common medium, fine, and very fine roots; few medium, and common fine and very fine pores; 5 percent gravels; slightly acid; abrupt smooth boundary.

Bw1—8 to 16 inches, brown (7.5YR 4/4) fine sandy loam; weak medium and fine subangular blocky structure; friable; common medium, fine, and very fine roots; common fine and very fine pores; 5 percent gravels and 5 percent cobbles; slightly acid; clear smooth boundary.

Bw2—16 to 27 inches, dark yellowish brown (10YR 4/4) gravelly fine sandy loam; weak medium subangular blocky structure; friable; common fine and very fine roots; common fine and very fine pores; few fine distinct light brownish gray (10YR 6/2) areas of iron depletion; 15 percent gravels; slightly acid; gradual smooth boundary.

Bw3—27 to 45 inches, brown (10YR 4/3) gravelly fine sandy loam; weak medium subangular blocky structure; friable; few fine, and common very fine roots; common fine and very fine pores; common fine distinct yellowish brown (10YR 5/6) masses of iron oxides and light brownish gray (10YR 6/2) areas of iron depletion; 15 percent gravels and 5 percent cobbles; slightly acid; gradual smooth boundary.

C—45 to 72 inches, dark grayish brown (10YR 4/2) gravelly loam; massive; friable; few fine and very fine roots in the upper part; common fine and very fine pores; common fine distinct yellowish brown (10YR 5/6) and brown (7.5YR 4/2) masses of iron oxides; 20 percent gravels and 5 percent cobbles; slightly alkaline.

The thickness of the solum ranges from 30 to 50 inches. Depth to carbonates is greater than 40 inches. Redoximorphic features occur within 30 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments, mostly gravel, range from 5 to 15 percent in the surface, from 5 to 35 percent in the subsoil, and from 5 to 50 percent in the substratum.

The A horizon has hue of 7.5YR or 10YR, value of 2 to 4, and chroma of 2 or 3. It is fine sandy loam, loam, or silt loam in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The Bw horizon has hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 2 to 6, with matrix chroma of 2 being restricted to depths greater than 20 inches. It is sandy loam, fine sandy loam, loam, or silt loam in the fine earth fraction. Reaction is slightly acid or neutral.

The BC horizon, if present, has hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 2 to 6. It is sandy loam, fine sandy loam, or loam in the fine earth fraction. Reaction is slightly acid or neutral.

The C horizon has hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 2 to 6. It is sandy loam, fine sandy loam, or loam in the fine earth fraction. Some pedons have thin layers of loamy sand. Reaction ranges from neutral to moderately alkaline.

Kingsbury Series

The Kingsbury series consists of very deep, somewhat poorly drained soils on lake plains. These soils formed in predominantly clayey marine sediments. Slopes range from 0 to 5 percent.

The Kingsbury soils are on landscapes near the Rhinebeck, Adjidaumo, Roundabout, Massena, Gardenisle and Benson soils. The Kingsbury soils have more clay in the particle size control section than Rhinebeck and Adjidaumo soils. Kingsbury soils have many redoximorphic features including masses of iron oxides in the subsoil relative to the gleyed matrix of Adjidaumo soils. Kingsbury soils have more clay, and less silt or very fine sand than the Roundabout soils. Kingsbury soils have few or no rock fragments in its profile relative to loamy Massena soils. Also, Kingsbury soils are very deep to bedrock compared to moderately deep Gardenisle soils and shallow Benson soils.

Typical pedon of Kingsbury silty clay loam in a Kingsbury-Rhinebeck complex, in the Town of Plattsburgh, about 0.2 mile west of U.S. Route 9 and 100 feet south of South Junction Road in a field with brush; USGS Plattsburgh topographic quadrangle, lat. 44 degrees 37 minutes 38 seconds N. and long. 73 degrees 27 minutes 7 seconds W., NAD 1927:

Ap1—0 to 4 inches, very dark gray (10YR 3/1) silty clay loam; grayish brown (10YR 5/2) dry; strong fine and medium granular structure; friable; many very fine and fine, and few medium and coarse roots; moderately acid; clear wavy boundary.

Ap2—4 to 8 inches, very dark gray (10YR 3/1) silty clay loam; light brownish gray (10YR 6/2) dry; weak medium and coarse subangular blocky structure parting to strong fine granular; friable; many fine and very fine, and few medium and coarse roots; neutral; clear smooth boundary.

E—8 to 11 inches, grayish brown (2.5Y 5/2) silty clay; moderate medium and coarse subangular blocky structure; firm; sticky and plastic; common fine and medium roots; few fine and medium tubular pores; many medium and coarse prominent strong brown (7.5YR 5/6) and brown (7.5YR 4/4) masses of iron oxides (total masses of iron oxides compose 50 percent of matrix volume); neutral; abrupt wavy boundary.

Btg1—11 to 22 inches, dark grayish brown (10YR 4/2) clay; moderate very coarse and coarse prismatic structure parting to strong fine and medium angular blocky; firm; very sticky and very plastic; few fine and very fine roots along prism faces; few fine and medium tubular pores; nearly continuous distinct clay films on blocky ped faces; gray (10YR 5/1) faces of prisms; many fine and medium distinct brown (7.5YR 4/4) (40 percent), common fine and medium distinct yellowish brown (10YR 5/4) and dark yellowish brown (10YR 4/4) masses of iron oxides; neutral; gradual wavy boundary.

Btg2—22 to 32 inches, brown (7.5YR 5/2) and dark grayish brown (10YR 4/2) clay; moderate very coarse and coarse prismatic structure parting to strong fine and medium angular blocky; firm; very sticky and very plastic; few fine and very fine roots along prism faces; few fine and medium tubular pores; nearly continuous distinct clay films on blocky ped faces; gray (10YR 5/1)) face of prisms; many fine and medium distinct strong brown (7.5YR 4/6), brown 7.5YR 4/4) and dark yellowish brown (10YR 4/4) masses of iron oxides (30 percent); slightly alkaline; slightly effervescent; clear wavy boundary.

Cg1—32 to 53 inches, dark grayish brown (10YR 4/2) silty clay; weak coarse prismatic structure parting to weak thin and medium varves; firm; sticky and plastic; many

fine and medium faint brown (10YR 4/3), common medium and fine distinct dark yellowish brown (10YR 4/4) and strong brown (7.5YR 5/6) masses of iron oxides, and common medium distinct brown (7.5YR 5/2) areas of iron depletion; 1 percent pebbles; strongly effervescent; moderately alkaline; clear smooth boundary.

Cg2—53 to 62 inches, grayish brown (10YR 5/2) silty clay; weak thin platy structure; firm; sticky and plastic; common fine and medium distinct dark yellowish brown (10YR 4/4) masses of iron oxides; 1 percent rock fragments; strongly effervescent; moderately alkaline; clear smooth boundary.

Cg3—62 to 72 inches, dark grayish brown (10YR 4/2) silty clay; weak thin platy structure; firm; sticky and plastic; gray (10YR 5/1) face of plates; common fine and medium distinct dark yellowish brown (10YR 4/4) and yellowish brown (10YR 5/6) masses of iron oxides; 1 percent black decomposed shale fragments; strongly effervescent, moderately alkaline.

The thickness of the solum ranges from 20 to 36 inches. Depth to carbonates ranges from 20 to 60 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is more than 60 inches. Rock fragments range from 0 to 3 percent.

The A or Ap horizon has hue of 10YR to 5Y, value of 2 to 5, and chroma of 1 to 3. Texture ranges from silt loam to silty clay in the fine earth fraction. Reaction ranges from strongly acid to slightly alkaline.

The E horizon has hue of 10YR to 5Y, value of 3 to 6, and chroma of 2 to 4. Texture ranges from silt loam to silty clay in the fine earth fraction. Reaction ranges from strongly acid to slightly alkaline.

The Bt horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 2 to 4. Texture ranges from silty clay to clay in the fine earth fraction in individual subhorizons, but averages 60 percent or more clay. Reaction ranges from strongly acid to slightly alkaline.

The C horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 2 to 4. Texture ranges from silty clay loam to clay in the fine earth fraction with thin strata of silt loam in some pedons. Reaction is slightly alkaline or moderately alkaline.

Lovewell Series

The Lovewell series consists of very deep, moderately well drained soils on flood plains. These soils formed in alluvial sediments dominated by very fine sand and silt. Slopes range from 0 to 3 percent.

The Lovewell soils are in a drainage sequence with the somewhat poorly drained Cornish soils and the very poorly drained Medomak soils. Lovewell soils are also in the landscape near the Monadnock, Kalurah, Adams, Colton and Wonsqueak soils. Lovewell soils have fewer rock fragments than Monadnock and Kalurah soils. The Lovewell soils have an irregular decrease in organic carbon content relative to depth whereas Adams and Colton soils decrease in organic carbon with depth. Lovewell soils do not have a thick organic accumulation as is characteristic of Wonsqueak soils.

Typical pedon of Lovewell very fine sandy loam, stratified substratum, in the Town of Champlain, about 250 feet north of intersection of Simmons Road with St. John's Road, and 2,600 feet east of St.John's Road in a cornfield; USGS Mooers topographic quadrangle, lat. 44 degrees 57 minutes 14 seconds N. and long. 73 degrees 30 minutes 31 seconds W., NAD 1927:

Ap—0 to 11 inches, dark brown (10YR 3/3) very fine sandy loam; weak coarse subangular blocky structure parting to weak medium granular; friable; common very fine roots; moderately acid; abrupt smooth boundary.

Bw1—11 to 20 inches, yellowish brown (10YR 5/4) very fine sandy loam; weak coarse and medium subangular blocky structure; friable; few very fine roots; moderately acid; clear wavy boundary.

Bw2—20 to 30 inches, yellowish brown (10YR 5/4) very fine sandy loam, grayish brown (10YR 5/2) face of prisms; weak very coarse prismatic structure parting to weak coarse subangular blocky; few very fine roots; common medium distinct grayish brown (10YR 5/2) areas of iron depletion, and common medium faint dark yellowish brown (10YR 4/4) masses of iron oxides; strongly acid; clear smooth boundary.

Cg1—30 to 50 inches, light brownish gray (10YR 6/2) very fine sandy loam; massive; friable; many medium distinct dark yellowish brown (10YR 4/4) and dark yellowish brown (10YR 4/6), and common fine distinct yellowish brown (10YR 5/6) masses of iron oxides; very strongly acid; abrupt smooth boundary.

Cg2—50 to 56 inches, grayish brown (10YR 5/2) fine sand; massive with weak thick plate-like divisions; very friable; many medium and coarse yellowish brown (10YR 5/6 and 5/4) masses of iron oxides; strongly acid; clear smooth boundary.

Cg3—56 to 75 inches, gray (10YR 5/1) fine sand; massive; very friable; many coarse distinct dark yellowish brown (10YR 3/4) masses of iron oxides; strongly acid.

The thickness of the solum ranges from 20 to 30 inches. Redoximorphic features occur within 30 inches of the mineral soil surface. Rock fragments range from 0 to 5 percent by volume to a depth of 40 inches and from 0 to 20 percent below 40 inches. Some pedons have buried horizons.

The Ap horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 4. It is silt loam or very fine sandy loam in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid unless limed.

The Bw horizon has hue of 10YR, value of 4 or 5 and chroma of 2 to 4. It is silt loam or very fine sandy loam in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The C horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 to 4. It is silt loam, very fine sandy loam, or loamy very fine sand in the fine earth fraction. Below 40 inches texture ranges from silt loam to fine gravel. Reaction ranges from very strongly acid to slightly acid.

Loxley Series

The Loxley series are very poorly drained soils in basin-like areas and within broad, stagnant drainageways. They are formed in very deep organic deposits. Slopes range from 0 to 2 percent.

The Loxley soils are on landscapes near the Adirondack, Sabattis, Beseman and Rumney soils. Loxley soils have a very deep organic deposits compared to Adirondack, Sabattis, Beseman and Rumney soils which were formed in dominantly mineral deposits.

Typical pedon of Loxley mucky peat, in the Town of Saranac, about 2.9 miles north on Chazy Lake Road from intersection with Clark Hill Road and about 25 feet west of Chazy Lake Road; USGS Moffitsville topographic quadrangle, lat. 44 degrees 41 minutes 28 seconds N. and long. 73 degrees 48 minutes 50 seconds W., NAD 1927:

Oe—0 to 16 inches, very dark brown (10YR 2/2) hemic material; 45 percent unrubbed fiber, 20 percent rubbed fiber; very weak thick platy structure; very friable; common very fine and fine roots; extremely acid (pH 4.0 in 0.01M CaCl2); clear smooth boundary.

Oa1—16 to 34 inches, very dark brown (10YR 2/2) sapric material; 20 percent unrubbed fiber, 6 percent rubbed fiber; massive; very friable; extremely acid (pH 4.0 in 0.01M CaCl2); gradual smooth boundary.

Oa2—34 to 61 inches, very dark brown (10YR 2/2) sapric material; 20 percent unrubbed fiber, 2 percent rubbed fiber; massive; very friable; extremely acid (pH 4.3 in 0.01M CaCl2); clear smooth boundary.

Oa3—61 to 72 inches, very dark brown (10YR 2/2) sapric material; 25 percent unrubbed fiber, 4 percent rubbed fiber; massive; very friable; few slightly decomposed wood fragments; extremely acid (pH 4.2 in 0.01M CaCl2).

The combined thickness of the organic layers is greater than 51 inches. Depth to bedrock is greater than 60 inches. Woody fragments (up to 2 inches in diameter) comprise up to 10 percent by volume in some pedons, and are absent in some pedons.

The surface layer has hue of 2.5YR to 10YR, value of 2 to 5, and chroma of 0 to 4. In some pedons there is a surface layer of sphagnum moss up to 18 inches thick. This layer is dominantly hemic material, but also may consist of fibric or sapric material. Reaction in 0.01M CaCl2 is extremely acid (3.5 to 4.5).

The subsurface layer has hue of 2.5YR to 10YR, value of 2 to 5, and chroma of 0 to 4. This tier consists of both sapric and hemic material. Reaction in 0.01M CaCl2 is extremely acid (3.5 to 4.5).

The bottom layer has hue of 2.5YR to 10YR, value of 2 to 5, and chroma of 0 to 4. This tier consists of dominantly sapric material. Reaction in 0.01M CaCl2 is extremely acid (3.5 to 4.5).

Lyman Series

The Lyman series consists of shallow, somewhat excessively drained soils on uplands. These soils formed in loamy glacial till deposits over crystalline bedrock. Slopes range from 3 to 70 percent.

The Lyman soils are on a landscape near the Tunbridge, Ricker, Monadnock, Becket and Adirondack soils. Lyman soils are more shallow to bedrock than the moderately deep Tunbridge soils. Lyman soils are mostly mineral soil compared to the dominantly organic Ricker soils. The Lyman soils are shallow whereas Monadnock, Becket and Adirondack soils are very deep. Also, Lyman soils lack dense substrata which are common in Becket and Adirondack soils.

Typical pedon of Lyman fine sandy loam, in a map unit of Tunbridge-Lyman complex, strongly sloping, very rocky, in the Town of Peru, approximately 3 miles west of the intersection of Patent Road with Reservoir Road, and about 600 feet north of Patent Road in a wooded area; USGS Peasleeville topographic quadrangle, lat. 44 degrees 33 minutes 28 seconds N. and long. 73 degrees 40 minutes 26 seconds W., NAD 1927:

Oa—0 to 3 inches, black (5YR 2.5/1) highly decomposed organic material; weak fine and medium granular structure; very friable; few coarse, common medium, and many fine and very fine roots; 5 percent rock fragments; very strongly acid; clear smooth boundary.

E—3 to 6 inches, reddish gray (5YR 5/2) fine sandy loam; weak fine subangular blocky structure; friable; few coarse, and common medium, fine and very fine roots; 5 percent rock fragments; very strongly acid; clear wavy boundary.

Bhs—6 to 8 inches, dark reddish brown (5YR 3/3) fine sandy loam; moderate medium subangular blocky structure; friable; few coarse and medium, and common fine and very fine roots; 5 percent rock fragments; strongly acid; clear wavy boundary.

Bs1—8 to 13 inches, dark reddish brown (5YR 3/4) fine sandy loam; moderate medium subangular blocky structure; friable; few coarse and medium, and common fine and very fine roots; 5 percent rock fragments; strongly acid; clear smooth boundary.

Bs2—13 to 17 inches, reddish brown (5YR 4/4) gravelly fine sandy loam; moderate medium subangular blocky structure; friable; few fine and very fine roots; 20 percent rock fragments; strongly acid; abrupt smooth boundary.

R—17 inches, crystalline bedrock.

The thickness of the solum and depth to bedrock range from 10 to 20 inches. Rock fragments range from 2 to 35 percent by volume.

The Oa, Oe, or Oi horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 0 to 2. It is accumulated organic matter in various stages of decomposition. Reaction ranges from extremely acid to moderately acid.

The A horizon, if present, has hue of 5YR to 10YR, value of 2 or 3, and chroma of 0 to 2. It is sandy loam, fine sandy loam, or very fine sandy loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The E horizon has hue of 5YR to 10YR, value of 5 to 7, and chroma of 0 to 2. It is sandy loam, fine sandy loam, or very fine sandy loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Bhs horizon has hue of 5YR or 7.5YR, value of 3, and chroma of 3. It is sandy loam, fine sandy loam, very fine sandy loam or loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Bs horizons have hue of 5YR or 7.5YR, value of 3 to 5, and chroma of 3 to 8. It is sandy loam, fine sandy loam, very fine sandy loam or loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

Lyonmounten Series

The Lyonmounten series are very deep, poorly drained soils on nearly level lowlands. These soils formed in loamy glacial till deposits. Slope ranges from 0 to 3 percent.

The Lyonmounten soils are in a drainage sequence with the well drained Bice soils, the moderately well drained Schroon soils, and the somewhat poorly drained Peasleeville soils. Lyonmounten soils are also near the Kalurah, Malone, Runeberg, Coveytown, Cook and Adirondack soils. Lyonmounten soils have a grayer matrix color in the subsoil than moderately well drained Kalurah soils. Lyonmounten soils have free carbonates at greater depths than the somewhat poorly drained Malone soils and very poorly drained Runeberg soils. Lyonmounten soils lack sandy surface and subsoil layers characteristic of Coveytown and Cook soils. Lyonmounten soils lack dense, slowly permeable substratum as in Adirondack soils.

Typical pedon of Lyonmounten loam, in the Town of Clinton, about 1,900 feet south of intersection of Campbell Road and Gagnier Road, then 800 feet west of Campbell Road; USGS Churubusco topographic quadrangle, lat. 44 degrees, 54 minutes, 3 seconds N. and long. 73 degrees, 58 minutes, 9 seconds W., NAD 1927:

Ap—0 to 9 inches, very dark grayish brown (10YR 3/2) loam; grayish brown (10YR 5/2) dry; weak medium subangular blocky structure parting to moderate fine granular; very friable; many fine and very fine, and few medium roots; common fine and medium prominent brown (7.5YR 4/4) and strong brown (7.5YR 5/6) masses of iron oxides; 5 percent rock fragments; strongly acid; abrupt smooth boundary.

E—9 to 17 inches, light brownish gray (10YR 6/2) loam; weak medium and coarse subangular blocky structure parting to weak thin platy; friable; few fine roots; common fine and medium pores; common fine and medium prominent dark yellowish brown (10YR 4/6) and distinct brown (7.5YR 4/4) masses of iron oxides; 10 percent rock fragments; strongly acid; clear wavy boundary.

Bg—17 to 24 inches, grayish brown (10YR 5/2) loam; light brownish gray (10YR 6/2) on faces of peds; moderate fine and medium subangular blocky structure; friable; few fine and very fine roots; few fine pores; many medium and coarse distinct dark yellowish brown (10YR 4/4) and yellowish brown (10YR 5/6) masses of iron oxides; 10 percent rock fragments; strongly acid; clear wavy boundary.

BCg1—24 to 34 inches, light brownish gray (10YR 6/2) gravelly loam; light brownish gray (2.5Y 6/2) on faces of peds; moderate coarse prismatic structure parting to

weak thin and medium platy; friable (firm in place); few fine and very fine roots; few fine pores; many medium and coarse distinct yellowish brown (10YR 5/4 and 10YR 5/6), and dark yellowish brown (10YR 4/4) masses of iron oxides; 15 percent rock fragments; strongly acid; clear wavy boundary.

BCg2—34 to 41 inches, variable gray (10YR 5/1), yellowish brown (10YR 5/6), and light olive brown (2.5Y 5/3) gravelly loam; weak thin and medium platy structure; friable; few fine pores; 15 percent rock fragments; moderately acid; clear wavy boundary.

C1—41 to 49 inches, light olive brown (2.5Y 5/3) gravelly loam; moderate thin and medium platy structure; friable; common fine and few medium pores; common fine and medium distinct yellowish brown (10YR 5/4 and prominent (10YR 5/6) masses of iron oxides and light brownish gray (10YR 6/2) areas of iron depletion on faces of peds; 20 percent rock fragments; slightly acid; gradual wavy boundary.

C2—49 to 72 inches, light olive brown (2.5Y 5/3) gravelly loam; moderate thin and medium platy structure; firm; few fine pores; few fine and medium distinct yellowish brown (10YR 5/4 and prominent yellowish brown (10YR 5/6) masses of iron oxides; 20 percent rock fragments (including 5 percent greater 3 inches); strongly effervescent, moderately alkaline.

The thickness of the solum ranges from 20 to 45 inches. Depth to carbonates is greater than 45 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments range from 0 to 25 percent by volume in the surface, and from 10 to 35 percent in the subsoil and substratum.

The Ap horizon has hue of 10YR, value of 2 or 3, and chroma of 1 or 2. Texture is loam or fine sandy loam in the fine earth fraction. Unless limed, reaction ranges from strongly acid to slightly acid.

The E horizon is neutral or has hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 0 to 2. Texture is loam or fine sandy loam in the fine earth fraction. Reaction ranges from strongly acid to slightly acid.

The Bg horizon has hue of 10YR or 2.5Y, value of 5 or 6 and chroma of 0 to 2. Texture is loam or fine sandy loam in the fine earth fraction. Reaction ranges from strongly acid to slightly acid.

The BCg horizon has hue of 10YR or 2.5Y, value of 5 or 6 and chroma of 0 to 6, although dominantly 0 to 3 chroma. Texture is loam or fine sandy loam in the fine earth fraction. Reaction ranges from strongly acid to slightly acid.

The C horizon has hue of 10YR or 2.5Y, value of 4 or 5 and chroma of 1 to 4. Texture is loam, fine sandy loam or sandy loam in the fine earth fraction. Reaction ranges from moderately acid to moderately alkaline.

Madrid Series

The Madrid series consists of very deep, well drained soils on lowlands. They formed in loamy glacial till deposits. Slopes range from 3 to 15 percent.

Madrid soils are in a drainage sequence with moderately well drained Bombay soils and somewhat poorly drained Appleton soils. The Madrid soils are commonly adjacent to the Champlain, Grattan, Deerfield, Covert, Junius, and Rhinebeck soils. The Madrid soils have less sand and more clay than excessively drained Grattan soils, somewhat excessively drained Champlain soils, moderately well drained Deerfield and Covert soils, and somewhat poorly drained Junius soils. Madrid soils have less clay than the somewhat poorly drained Rhinebeck soils.

Typical pedon of Madrid fine sandy loam, 3 to 8 percent slopes, in the Town of Schuyler Falls, about 1.5 miles north of the intersection of State Route 22B with Salmon River Road and 40 feet east of Route 22B in a woodlot; USGS Morrisonville

topographic quadrangle, lat. 44 degrees 39 minutes 17 seconds N. and long. 73 degrees 34 minutes 15 seconds W., NAD 1927:

A—0 to 6 inches; very dark grayish brown (10YR 3/2) fine sandy loam; moderate medium granular structure; friable; many fine and coarse roots; many fine pores; 5 percent rock fragments; neutral; clear wavy boundary.

BE—6 to 14 inches; brown (10YR 5/3) fine sandy loam; weak fine granular structure; very friable; many fine and coarse roots; many fine pores; 5 percent rock fragments; moderately acid; gradual wavy boundary.

E—14 to 20 inches; pale brown (10YR 6/3) fine sandy loam; massive; friable; common medium and coarse roots; common fine pores; 10 percent rock fragments; slightly acid; clear irregular boundary.

2B/E—20 to 28 inches; brown (10YR 5/3) gravelly loam; moderate medium blocky structure; peds have coats (E material - 20percent) of light brownish gray (10YR 6/2) fine sandy loam 1 to 3 millimeters thick; friable; common medium roots; common fine pores with clay linings; 20 percent rock fragments; slightly acid; gradual wavy boundary.

2Bt—28 to 42 inches; brown (10YR 4/3) gravelly loam; moderate medium blocky structure; thin patchy clay films on horizontal and vertical faces of peds; friable; few medium and coarse roots; common medium and fine pores with clay linings; 25 percent rock fragments; neutral; clear wavy boundary.

2C—42 to 72 inches; grayish brown (10YR 5/2) gravelly fine sandy loam; moderate thick platy structure; firm; few roots; few pores; 30 percent rock fragments; neutral (calcareous at 60 inches).

The thickness of the solum ranges from 36 to 60 inches. Depth to carbonates ranges from 36 to 84 inches. Depth to bedrock is greater than 60 inches. Rock fragments range from 0 to 25 percent in the surface and subsurface, 5 to 30 percent in the subsoil and up to 40 percent in the substratum.

The A or Ap horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 or 3. It is fine sandy loam to silt loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The BE horizon has hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 3 to 6. It is fine sandy loam to silt loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The E horizon has hue of 7.5YR to 2.5Y, value of 5 or 6, and chroma of 2 or 3. It is fine sandy loam to silt loam in the fine earth fraction. Interfingering of E material into the B horizon is distinct. Reaction ranges from strongly acid to neutral.

The Bt horizon has hue of 5YR to 2.5Y, value of 3 to 5, and chroma of 2 to 4. It is fine sandy loam to silt loam in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The C horizon has hue of 5YR to 2.5Y, value of 3 to 5, and chroma of 2 to 4. It is fine sandy loam to silt loam in the fine earth fraction. Reaction ranges from neutral to moderately alkaline.

Malone Series

The Malone series consists of very deep, somewhat poorly drained soils on lowlands. These soils formed in loamy calcareous glacial till derived mainly from dolostone or limestone. Slopes range from 0 to 8 percent.

The Malone soils are in a drainage sequence with well drained Grenville soils, moderately well drained Hogansburg soils and very poorly drained Runeberg soils. Malone soils are adjacent to Kalurah, Coveytown, Muskellunge, Hailesboro and Swanton soils. The Malone soils have redoximorphic features higher in the subsoil than Kalurah soils. Malone soils lack the sandy subsoil that is part of Coveytown soils.

Muskellunge and Hailesboro soils are dominated by lacustrine clay and silt sediments. Malone soils lack a clayey substratum characteristic of Swanton soils.

Typical pedon of Malone gravelly loam, 0 to 3 percent slopes, in the Town of Plattsburgh, 0.7 mile south of Beekmantown townline, 1.6 miles northeast of West Plattsburgh and 25 feet east of State Route 190 in a pasture; USGS Morrisonville topographic quadrangle, lat. 44 degrees 43 minutes 32 seconds N. and long. 73 degrees 32 minutes 28 seconds W., NAD 1927:

Ap—0 to 9 inches, very dark grayish brown (10YR 3/2) gravelly loam; light brownish gray (10YR 6/2); moderate fine granular structure; very friable; many fine roots; 20 percent rock fragments; slightly acid; clear smooth boundary.

Bw1—9 to 20 inches, brown (10YR 5/3) gravelly fine sandy loam, grayish brown (10YR 5/2) to gray (10YR 5/1) on faces of peds; weak medium and fine blocky structure; ; friable; common fine roots; few fine pores; many (30 percent) medium faint grayish brown (10YR 5/2) areas of iron depletion and common (20 percent) medium faint yellowish brown (10YR 5/6) masses of iron oxides; 25 percent rock fragments; slightly acid; gradual wavy boundary.

Bw2—20 to 30 inches, brown (10YR 5/3) gravelly fine sandy loam; massive; friable; few fine roots; few fine pores; many (40 percent) medium faint yellowish brown (10YR 5/6) masses of iron oxides; 30 percent rock fragments; neutral; clear wavy boundary.

Cdg—30 to 72 inches, grayish brown (10YR 5/2) very gravelly sandy loam; weak thick plate-like divisions; very firm; few medium and fine faint brown (10YR 5/3) and distinct yellowish brown (10YR 5/6) masses of iron oxides; 35 percent rock fragments; strongly effervescent; moderately alkaline.

The thickness of the solum ranges from 18 to 36 inches. Depth of carbonates ranges from 20 to 50 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments range from 5 to 35 percent by volume in the surface and subsoil, and from 5 to 50 percent in the substratum.

The Ap horizon has hue of 10YR, value of 2 to 5 and chroma of 1 or 2. Texture ranges from silt loam, loam, fine sandy loam or sandy loam in the fine earth fraction. Reaction is moderately acid or slightly acid.

The Bw horizon has hue of 5YR to 2.5Y, value of 3 to 6 and chroma of 3 to 6. Texture is loam, fine sandy loam or sandy loam in the fine earth fraction. Reaction is slightly acid or neutral.

The Bg horizon, if present, has hue of 5YR to 2.5Y, value of 3 to 6 and chroma of 1 or 2. Texture is loam, fine sandy loam or sandy loam in the fine earth fraction. Reaction is slightly acid or neutral.

The C horizon has hue of 10YR or 2.5Y, value of 5 or 6 and chroma of 2 to 4. Texture is fine sandy loam or sandy loam in the fine earth fraction. Reaction ranges from neutral to moderately alkaline.

Markey Series

The Markey series consists of very deep, very poorly drained organic soils overlying sandy deposits. These soils formed in organic material 16 to 51 inches thick overlying sandy deposits on glacial lake plains. Slope is less than 2 percent.

The Markey soils are associated on the landscape with the Deinache, Sciota, Wainola, Adams and Bucksport soils. Markey soils have more organic matter throughout the profile than the Deinache, Sciota, Wainola and Adams soils. In addition, Markey soils have darker colors throughout the profile than the Sciota, Wainola and Adams soils. Markey soils have thinner organic material than the Bucksport soils which are greater than 51 inches thick.

Typical pedon of Markey muck, in the Town of Chazy, 0.5 mile north of intersection with LaPlante Road and about 350 feet east of O'Neil Road in a bog; USGS West Chazy topographic quadrangle, lat. 44 degrees 48 minutes 9 seconds N. and long. 73 degrees 31 minutes 0 seconds W., NAD 1927:

Oa1—0 to 14 inches, black (10YR 2/1) sapric material; massive; 5 percent unrubbed fiber, 2 percent rubbed fiber; friable; slightly alkaline; gradual wavy boundary.

Oa2—14 to 27 inches, black (5YR 2.5/1) sapric material; massive; 40 percent unrubbed fiber, 5 percent rubbed fiber; friable; neutral; abrupt smooth boundary.

Cg—27 to 72 inches, gray (5Y 5/1) sand; single grain; friable; neutral.

The depth to the 2C horizon is commonly 24 to 42 inches and ranges from 16 to 51 inches. Some pedons have woody fragments as much as 15 percent by volume. The 2C horizon contains up to 15 percent gravel by volume.

Some pedons have a 1 to 4 inch layer of sphagnum moss at the surface.

The surface layer has hue of 5YR to 10YR (or it is neutral), value of 2 to 4, and chroma of 0 to 3. The surface layer is mainly sapric material, but some pedons have sapric or hemic material, or both in varying proportions. Reaction ranges from moderately acid to slightly alkaline.

The subsurface layer has hue of 5YR to 10YR (or it is neutral), value of 2 to 4, and chroma of 0 to 3. It is dominantly sapric material, but some pedons have as much as 10 inches of hemic material or 5 inches of fibric material within this depth. Reaction ranges from moderately acid to slightly alkaline.

The 2C horizon has hue of 7.5YR to 5Y (or it is neutral), value of 4 to 6, chroma of 0 to 4. It is sand, fine sand, or loamy sand in the fine earth fraction. Thin layers of loamy materials overlying the sand are also included. Some pedons have loamy material below the sandy material. Reaction ranges from moderately acid to moderately alkaline.

Massena Series

The Massena series consists of very deep, somewhat poorly drained soils on lowlands. They formed in loamy calcareous glacial till derived mainly from dolomite or limestone. Slopes range from 0 to 3 percent.

The Massena soils are in a drainage sequence with moderately well drained Amenia soils. Massena soils are adjacent to Covertfalls, Northway, Rhinebeck, Shaker, Runeberg and Benson soils. Massena soils lack the sandy mantle as is characteristic of Covertfalls and Northway soils. Massena soils have less clay and rock fragments than the Rhinebeck soils and the substratum portion of Shaker soils. Massena soils lack a thick black surface layer relative to very poorly drained Runeberg soils. The Massena soils are very deep to bedrock whereas Benson soils are shallow.

Typical pedon of Massena fine sandy loam, in the Town of Peru, 3100 feet north of the intersection of State Route 22 and Brand Hollow Road, and 2150 feet west of Route 22 in a pasture; USGS Peru topographic quadrangle, lat. 44 degrees 36 minutes 58 seconds N. and long. 73 degrees 30 minutes 29 seconds W., NAD 1927:

Ap—0 to 9 inches, very dark grayish brown (10YR 3/2) fine sandy loam, light brownish gray (10YR 6/2) dry; weak fine and very fine granular structure; very friable; many fine and very fine, and few medium and coarse roots; 10 percent rock fragments; slightly acid; abrupt smooth boundary.

Bw—9 to 25 inches; brown (10YR 5/3) gravelly fine sandy loam, grayish brown (10YR 5/2) on faces of peds; moderate medium subangular blocky structure; friable; common fine and very fine, and few medium roots; common fine and medium pores; many medium distinct dark yellowish brown (10YR 4/6 and 4/4) masses of iron oxides; 20 percent rock fragments; neutral; clear wavy boundary.

BC—25 to 32 inches, 50 percent grayish brown (10YR 5/2) and 45 percent yellowish brown (10YR 5/6) gravelly loam; moderate thin and medium platy structure; firm;

few fine and very fine roots; common fine and few medium pores; common medium distinct strong brown (7.5YR 5/6) masses of iron oxides; 20 percent rock fragments; neutral; gradual wavy boundary.

Cg1—32 to 48 inches, gray (10YR 5/1) gravelly loam; massive with weak medium plate-like divisions; firm; few fine and very fine roots in upper 6 inches; few fine pores; many medium and coarse distinct yellowish brown (10YR 5/6) and common fine and medium distinct strong brown (7.5YR 5/6) masses of iron oxides; 28 percent rock fragments (including 3 percent cobbles); moderately alkaline, strongly effervescent; gradual wavy boundary.

Cg2—48 to 72 inches, grayish brown (2.5Y 5/2) gravelly loam; massive; firm; few fine pores; common medium and fine distinct dark yellowish brown (10YR 4/4) masses of iron oxides; 28 percent rock fragments (including 3 percent cobbles); moderately alkaline, strongly effervescent.

The thickness of the solum ranges from 18 to 36 inches. Depth to carbonates ranges from 20 to 50 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Rock fragments range from 5 to 35 percent by volume in the surface and subsoil, and from 5 to 50 percent in the substratum.

The Ap horizon has hue of 7.5YR to 2.5Y, value of 3 or 4 and chroma of 1 or 2. Texture ranges silt loam, loam, fine sandy loam or sandy loam in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The Bw horizon has hue of 5YR to 2.5Y, value of 4 to 6 and chroma of 3 or 4. Texture is loam, fine sandy loam or sandy loam in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The BC horizon has hue of 5YR to 2.5Y, value of 4 to 6 and chroma of 2 to 4. Texture is loam, fine sandy loam or sandy loam in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The Cg horizon has hue of 5YR to 2.5Y, value of 4 to 6 and chroma of 1 to 4. Texture is loam, fine sandy loam or sandy loam in the fine earth fraction. Reaction ranges from neutral to moderately alkaline.

Medomak Series

The Medomak series consists of very deep, very poorly drained soils on flood plains. These soils formed in alluvial sediments dominated by very fine sand and silt. Slopes range up to 1 percent.

The Medomak soils are in a drainage sequence with moderately well drained Lovewell soils and somewhat poorly drained Cornish soils. Medomak soils are also in the landscape near the Sunapee, Schroon, Malone, Muskellunge, Adams, Colton and Wonsqueak soils. Medomak soils have fewer rock fragments than in Sunapee, Schroon and Malone soils formed in glacial till. Medomak soils have less clay and more silt than Muskellunge soils. The Medomak soils have an irregular decrease in organic carbon content with depth which contrasts with Adams and Colton soils. Medomak soils lack a thick organic mantle as in Wonsqueak soils.

Typical pedon of Medomak silt loam, stratified substratum, in the Town of Clinton, about 3000 feet north of Clinton Mills Road and 100 feet east of Colgan Road in land reverting to brush; USGS Ellenburg Depot topographic quadrangle, lat. 44 degrees 58 minutes 18 seconds N. and long. 73 degrees 49 minutes 30 seconds W., NAD 1927:

Oi—0 to 1 inch, slightly decomposed sedges and grasses.

A—1 to 13 inches, very dark grayish brown (10YR 3/2) silt loam; grayish brown (10YR 5/2) dry; weak medium and fine granular structure; friable; few medium, and common fine very fine roots; common fine and very fine pores; strongly acid; clear smooth boundary.

Cg1—13 to 26 inches, dark gray (10YR 4/1) very fine sandy loam; massive; very friable; few fine and very fine roots; common fine and very fine pores; few fine prominent yellowish brown (10YR 5/6) and common fine distinct very dark grayish brown (2.5Y 3/2) masses of iron oxides; slightly acid; clear smooth boundary.
Cg2—26 to 47 inches, very dark gray (5Y 3/1) very fine sandy loam; massive; very friable; few very fine roots; common fine and very fine pores; few fine prominent strong brown (7.5YR 4/6) and dark yellowish brown (10YR 4/6) masses of iron oxides; neutral; clear smooth boundary.
Cg3—47 to 72 inches, very dark gray (N 3/0) gravelly fine sandy loam; massive; very friable; few medium, and common fine and very fine pores; 20 percent rock fragments; neutral.

Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments above a depth of 40 inches range from 0 to 5 percent by volume, and from 0 to 50 percent below 40 inches. Some pedons have buried horizons.

Some pedons have thin Oi or Oe horizons.

The Ap or A horizon is neutral or has hue of 7.5YR to 2.5Y, value of 2 or 3, and chroma of 0 to 2. Texture is silt loam, very fine sandy loam, or their mucky analogues. Reaction ranges from very strongly acid to slightly acid.

The Bg horizon, if present, is neutral or has hue of 10YR to 5Y, value of 3 to 6, and chroma of 0 to 2. Texture is silt loam or very fine sandy loam in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The C horizon is neutral or has hue of 10YR to 5GY, value of 3 to 6, and chroma of 0 to 2. Texture is silt loam, very fine sandy loam, or loamy very fine sand in the fine earth fraction; however, below 40 inches it ranges from silt loam to fine gravel. Reaction ranges from very strongly acid to slightly acid to about 30 inches deep, and ranges from moderately acid to neutral below a depth of 30 inches.

Mino Series

The Mino series consists of very deep, somewhat poorly drained soils on lowland plains. These soils were formed in loamy, near-shore lacustrine deposits. Slopes range from 0 to 3 percent.

The Mino soils occur on landscapes near the Hailesboro, Muskellunge, Swanton and Hogansburg soils. Mino soils have less clay throughout the profile than both Haileboro and Muskellunge soils. The Mino soils lack clayey substrata as is characteristic of Swanton soils. Mino soils typically lack or have only trace amounts of rock fragments which are more common in Hogansburg soil profiles.

Typical pedon of Mino loam, Town of Beekmantown, 0.3 mile west of U.S. Route 9 and about 100 feet south of Conroy Road, in a cornfield; USGS Beekmantown topographic quadrangle, lat. 44 degrees 47 minutes 22 seconds N. and long. 73 degrees 26 minutes 6 seconds W., NAD 1927:

Ap—0 to 9 inches, very dark grayish brown (10YR 3/2) loam; light brownish gray (10YR 6/2) dry; moderage fine granular structure; very friable; many fine roots; 1 percent rock fragments; moderately acid; gradual smooth boundary.
Bw1—9 to 12 inches, brown (10YR 5/3) very fine sandy loam; weak fine granular structure; friable; few medium and fine roots; common medium distinct light yellowish brown (10YR 6/4) and common medium distinct yellowish brown (10YR 5/8) masses of iron oxides, and few medium faint grayish brown (10YR 5/2) areas of iron depletion; 1 percent rock fragments; neutral; gradual smooth boundary.
Bw2—12 to 16 inches, pale brown (10YR 6/3) loamy very fine sand; weak fine angular blocky structure; friable; few medium and fine roots; many medium distinct

yellowish brown (10YR 5/6 and yellowish brown (10YR 5/8) masses of iron oxides; neutral; gradual smooth boundary.

Bw3—16 to 24 inches, brown (10YR 5/3) very fine sandy loam; weak fine angular blocky structure; friable; few medium and fine roots; grayish brown (10YR 5/2) on faces of peds; many medium distinct strong brown (7.5YR 5/8) masses of iron oxides, and many medium distinct brown (7.5YR 5/2) areas of iron depletion; 1 percent rock fragments; neutral; gradual smooth boundary.

Cg1—24 to 37 inches, light gray (10YR 7/2) very fine sandy loam; massive with weak medium plate-like divisions; friable; many medium distinct brownish yellow (10YR 6/6) masses of iron oxides; 1 percent rock fragments; neutral; gradual smooth boundary.

Cg2—37 to 78 inches, gray (10YR 5/1) very fine sandy loam; massive; friable; common medium distinct yellowish brown (10YR 5/6) masses of iron oxides; neutral.

The thickness of the solum ranges from 20 to 40 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments range from 0 to 5 percent by volume in the solum and substratum.

The Ap horizon has hue of 10YR, value of 3 or 4 and chroma of 1 to 3. Texture is fine sandy loam, very fine sandy loam, loam or silt loam in the fine earth fraction. Reaction ranges from strongly acid to slightly acid.

The Bw horizon has hue of 7.5YR to 2.5Y, value of 4 to 6 and chroma of 2 to 4. Texture is fine sandy loam, very fine sandy loam and loam in the fine earth fraction, with thin subhorizons of silt loam and loamy very fine sand. Reaction ranges from moderately acid to neutral.

The BC horizon, if present, has hue of 7.5YR to 2.5Y, value of 4 to 7 and chroma of 2 to 6. Texture is fine sandy loam, very fine sandy loam and loam in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The C horizon has hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 to 4. Texture is fine sandy loam, very fine sandy loam and loam in the fine earth fraction. Raaction ranges from slightly acid to moderately alkaline.

Monadnock Series

The Monadnock series consists of very deep, well drained soils on upland plains. These soils formed in loamy soil overlying sandy glacial till deposits. Slopes range from 3 to 60 percent.

The Monadnock soils are in a drainage sequence with moderately well drained Sunapee soils. Monadnock soils occur on the landscape near the Adirondack, Sabattis, Becket, Skerry, Tunbridge and Colton soils. The Monadnock soils lack the redoximorphic features and gray colors of somewhat poorly drained Adirondack soils and very poorly drained Sabattis soils. Monadnock soils are friable throughout most of its profile, whereas Becket soils and Skerry soils have a dense, firm substratum. The Monadnock soils are deeper to bedrock than the moderately deep Tunbridge soils. Finally, Monadnock soils have fewer rock fragments than Colton soils.

Typical pedon of Monadnock fine sandy loam, 3 to 8 percent slopes, in the Town of Saranac, in road bank on north side of road about 0.5 mile west of the hamlet of Standish on Wolf Pond Road in wooded area; USGS Lyon Mountain topographic quadrangle, lat. 44 degrees 41 minutes 22 seconds N. and long. 73 degrees 57 minutes 53 seconds W., NAD 1927:

E—0 to 2 inches, dark grayish brown (10YR 4/2) fine sandy loam; weak fine subangular blocky structure parting to weak very fine granular; very friable; many

fine, common medium, and few coarse roots; very strongly acid; abrupt discontinuous boundary.

Bhs1—2 to 4 inches, dark reddish brown (5YR 2.5/2) very fine sandy loam; weak fine granular structure; very friable; common fine, many medium, and few coarse roots; 5 percent rock fragments; very strongly acid; abrupt discontinuous boundary.

Bhs2—4 to 8 inches, dark brown (7.5YR 3/3) fine sandy loam; weak medium subangular blocky structure parting to weak fine granular; very friable; few fine, common medium, and few coarse roots; 10 percent rock fragments; very strongly acid; clear irregular boundary.

Bs1—8 to 15 inches, dark brown (7.5YR 3/4) fine sandy loam; weak fine subangular blocky structure; very friable; few fine and medium roots; 10 percent rock fragments (including 2 percent cobbles and stones); strongly acid; clear wavy boundary.

Bs2—15 to 27 inches, brown (7.5YR 4/4) fine sandy loam; moderate medium subangular blocky structure; friable; few fine and medium roots; 10 percent rock fragments; moderately acid; clear wavy boundary.

BC—27 to 36 inches, dark yellowish brown (10YR 4/6) fine sandy loam; weak thin platy structure parting to weak fine subangular blocky structure; friable; few fine and medium roots; 15 percent rock fragments (including 2 percent cobbles and stones); moderately acid; clear wavy boundary.

2C1—36 to 48 inches, yellowish brown (10YR 5/4) and dark yellowish brown (10YR 4/4) loamy fine sand; massive; friable; few fine roots in upper few inches; 10 percent rock fragments (including 2 percent cobbles and stones); moderately acid; clear smooth boundary.

2C2—48 to 72 inches, brown (10YR 5/3) loamy fine sand; massive; friable; 5 percent rock fragments; moderately acid.

The thickness of the solum ranges from 15 to 36 inches. Depth to bedrock is more than 60 inches. Rock fragments range 0 to 30 percent by volume in the surface and subsoil, and from 5 to 60 percent in the substratum. Rock fragments average less than 35 percent in the 10 to 40 inch particle size control section.

The A horizon, if present, has hue of 7.5YR or 10YR, value of 2 to 4, and chroma of 1 to 3. Texture is sandy loam, fine sandy loam, loam, or very fine sandy loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The E horizon has hue of 5YR to 2.5Y, value of 4 to 7, and chroma of 1 or 2. Texture is sandy loam, fine sandy loam, loam, or very fine sandy loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Bh horizon has hue of 2.5YR to 7.5YR, value and chroma of 3 or less. Texture is fine sandy loam, loam, or very fine sandy loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Bhs horizon has hue of 2.5YR to 7.5YR, value and chroma of 3. It is fine sandy loam, loam or very fine sandy loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Bs horizon has hue of 2.5YR to 7.5YR, value of 3 to 6, and chroma of 3 to 8. It is dominantly fine sandy loam, but includes loam and very fine sandy loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The BC horizon has hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 3 to 8. It is loamy sand, loamy fine sand, sandy loam, fine sandy loam or loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The 2C horizon has hue of 10YR to 5Y, value of 4 to 7, and chroma of 2 to 4. It is loamy coarse sand, loamy sand, or loamy fine sand in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

Mooers Series

The Mooers series consists of very deep, moderately well drained soils on glacial lake plains and beach deposits. These soils formed in fine and medium sands. Slopes range from 0 to 8 percent.

The Mooers soils are in a drainage sequence with the somewhat excessively drained and well drained Champlain soils, somewhat poorly drained Sciota soils and the poorly drained Deinache soils. Mooers soils are also associated with the Croghan, Muskellunge, Flackville, Kalurah, Malone and Coveytown soils. The Mooers soils are on identical landscapes as Croghan soils but lack spodic development. Mooers soils have much less clay throughout its profile than Muskellunge and Flackville soils. The Mooers soils have less silt and clay than the loamy Kalurah and Malone soils. Mooers soils lack loamy material within 40 inches deep as is characteristic of Coveytown soils (fig. 22).

Typical pedon of Mooers loamy sand, 0 to 3 percent, in the Town of Beekmantown, 0.4 mile south of junction of U.S. Route 9 and Point Au Roche Road, then about 2,300 feet west of Route 9; USGS Beekmantown topographic quadrangle, lat. 44 degrees 46 minutes 13 seconds N. and long. 73 degrees 25 minutes 56 seconds W., NAD 1927:

Ap—0 to 8 inches; dark brown (10YR 3/3) loamy sand; pale brown (10YR 6/3) dry; weak medium granular structure; friable; many fine and very fine roots; neutral (limed); abrupt smooth boundary.

Bw1—8 to 20 inches; yellowish brown (10YR 5/6) sand; few medium faint silt coatings; single grain; loose; many very fine roots; neutral; clear wavy boundary.

Bw2—20 to 31 inches; dark yellowish brown (10YR 4/4) sand; single grain; loose; few very fine roots; common fine and medium faint dark yellowish brown (10YR 4/6) soft masses of iron oxides; neutral; clear wavy boundary.

BC—31 to 47 inches; brown (10YR 5/3) and yellowish brown (10YR 5/4) fine sand; single grain; loose; few very fine roots; many fine faint yellowish brown (10YR 5/6) and common medium faint dark yellowish brown (10YR 4/4) soft masses of iron oxides; neutral; abrupt smooth boundary.

2C1—47 to 49 inches; brown (10YR 5/3) loamy very fine sand; massive; friable; few very fine roots; common fine faint light brownish gray (10YR 6/2) areas of iron depletion and many fine distinct dark yellowish brown (10YR 4/4) soft masses of iron oxides; slightly alkaline; abrupt smooth boundary.

2C2—49 to 60 inches; light olive brown (2.5Y 5/4) and 10 percent brown (10YR 4/3) loamy very fine sand; massive; friable; many course and medium prominent light brownish gray (10YR 6/2) areas of iron depletion and many fine prominent yellowish brown (10YR 5/6) soft masses of iron oxides; slightly alkaline; abrupt smooth boundary.

3C—60 to 72 inches, 70 percent light brownish gray (10YR 6/2), 30 percent brown (10YR 5/3) fine sand; moderate thin and medium bands of loamy very fine sand and silt loam; single grain; loose; slightly effervescent, slightly alkaline.

The thickness of the solum ranges from 24 to 55 inches. Depth to carbonates is greater than 50 inches. Redoximorphic features occur between 18 and 30 inches below the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments are typically absent, but may range up to 2 percent by volume in the lower subsoil and substratum.

The Ap horizon has hue of 10YR, value of 3 or 4, and chroma of 2 or 3. Texture is sand, fine sand, loamy sand or loamy fine sand in the fine earth fraction. Unless the soil is limed, reaction ranges from strongly acid to slightly acid.

The Bw horizon has hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 3 to 6. Texture is sand, fine sand, loamy sand or loamy fine sand in the fine earth fraction. Reaction ranges from moderately acid to slightly alkaline.

Figure 22.—A profile of Mooers loamy sand with thin layers of finer textures below 3 feet deep that retard water percolation.

The BC horizon has hue of 10YR or 2.5Y, value of 4 or 5 and chroma of 3 or 4. Texture is sand or fine sand in the fine earth fraction. Reaction ranges from moderately acid to slightly alkaline.

The C or 2C horizons have hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 2 to 4. Texture is fine sand or loamy fine sand in the fine earth fraction; but 2C horizons have loamy very fine sand or silt loam textures below a depth of 40 inches. Reaction ranges from moderately acid to slightly alkaline.

Mundalite Series

The Mundalite series consists of very deep, well drained soils on high elevation, glaciated uplands. They formed in loamy glacial till. Slopes range from 3 to 60 percent.

Mundalite soils are near Hogback, Rawsonville, Ricker and Worden soils on the landscape. The Mundalite soils are deeper than shallow Hogback and moderately deep Rawsonville soils. Mundalite soils are dominantly mineral soil in contrast to Ricker soils which are dominantly organic deposits. Mundalite soils do not have redoximorphic features in the subsoil as is characteristic of somewhat poorly drained Worden soils.

Typical pedon of Mundalite fine sandy loam, in a map unit of Mundalite-Rawsonville

complex, 15 to 35 percent slopes, very bouldery, in the Town of Dannemora, about 1.9 mile south of the intersection with State Route 374 and 1.0 mile west of Chazy Lake Road; USGS Moffitsville topographic quadrangle; lat. 44 degrees 43 minutes 27 seconds N. and long. 73 degrees 50 minutes 38 seconds W., NAD 1927 (fig. 23):

Oa—0 to 1 inch, black (5YR 2.5/1) sapric material consisting of decomposed roots and leaves.

E—1 to 3 inches, reddish gray (5YR 5/2) fine sandy loam; weak medium and fine subangular blocky structure; very friable; many fine and very fine, and few medium roots; 7 percent rock fragments; extremely acid; abrupt wavy boundary.

Bh—3 to 5 inches, dark reddish brown (5YR 2.5/2) fine sandy loam; weak medium and fine subangular blocky structure; very smeary; very friable; many fine and very fine roots; 7 percent rock fragments; very strongly acid; clear wavy boundary.

Bs1—5 to 14 inches, dark reddish brown (5YR 3/4) fine sandy loam; weak medium and fine subangular blocky structure; smeary; very friable; many fine and very fine, and few coarse and medium roots; many fine and very fine pores; 10 percent gravel; strongly acid; clear wavy boundary.

Bs2—14 to 27 inches, dark reddish brown (5YR 3/4) cobbly fine sandy loam; weak coarse and medium subangular blocky structure; moderately smeary; friable; common very fine and fine roots; common fine and very fine pores; 15 percent rock fragments (including 5 percent gravel); very strongly acid; clear wavy boundary.

Cd1—27 to 37 inches, dark yellowish brown (10YR 3/4) very cobbly fine sandy loam; massive with weak thick and very thick plate-like divisions and with loamy sand lenses between plates; very firm; few very fine roots in the upper part; common fine and very fine pores; 35 percent rock fragments (including 10 percent gravel); strongly acid; clear wavy boundary.

Cd2—37 to 72 inches, dark yellowish brown (10YR 4/4) very cobbly loamy sand; massive; very firm; common fine and very fine pores; few fine and medium faint dark yellowish brown (10YR 4/6) soft masses of iron oxides; 40 percent rock fragments (including 20 percent gravel); strongly acid.

The thickness of the solum and depth to dense basal till range from 25 to 40 inches. Redoximorphic features consisting of iron depletions or concentrations occur within 40 inches of the mineral surface. The spodic horizon is typically greater than 18 inches thick. Rock fragments range from 0 to 25 percent in the solum and from 5 to 50 percent in the substratum.

The O horizon, if present, can be fibric, hemic or sapric material. It is neutral or has hue of 5YR to 10YR, value of 2 or 2.5 and chroma of 1. Reaction ranges from extremely acid to moderately acid.

The A horizon, if present, is neutral or has hue of 5YR to 10YR, value of 2 or 3, and chroma of 0 to 2. It is loam, fine sandy loam or sandy loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The E horizon is neutral or has hue of 2.5YR to 10YR, value of 4 or 5, and chroma of 0 to 3. It is loam, fine sandy loam, or sandy loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Bh horizon is neutral or has hue of 10R to 7.5YR, value of 2 or 3, and chroma of 0 to 2. It is loam, fine sandy loam, or sandy loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

Some pedons have a Bhs horizon up to 20 inches thick. It has hue of 10R to 7.5YR, value of 3 or 4 and chroma of 2 or 3. It is loam, fine sandy loam, or sandy loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Bs horizon has hue of 10R to 7.5YR, and value and chroma of 3 to 5. It is loam, fine sandy loam, or sandy loam in the fine-earth fraction. Reaction ranges from extremely acid to moderately acid.

Figure 23.—A profile of Mundalite fine sandy loam. The spodic horizon occurs between 10 and 55 cm. deep. A firm, dense substratum is 70 cm. and below.

Some pedons have a BC horizon. It has hue of 7.5YR to 2.5Y, value of 4 or 5 and chroma of 2 to 6. It is fine sandy loam, sandy loam, loamy fine sand or loamy sand in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Cd horizon has hue of 10YR to 5Y, value 3 to 6, and chroma of 2 to 4. Texture ranges from loamy sand to fine sandy loam or sandy loam in the fine earth fraction. Textures of fine sandy loam and sandy loam occur mainly within masses of the plate-like divisions. Reaction ranges from very strongly acid to slightly acid.

Muskellunge Series

The Muskellunge series consists of very deep, somewhat poorly drained soils on glacial lake plains. These soils formed in lacustrine and marine sediments having a high content of clay and silt. Slopes range from 0 to 8 percent.

The Muskellunge soils are in a drainage sequence with the moderately well drained Heuvelton soils, and the poorly drained and very poorly drained Adjidaumo soils. Muskellunge soils are also near the Hogansburg, Malone, Kalurah, Hailesboro, Swanton and Pinconning soils on the landscape. The Muskellunge soils generally lack rock fragments which are common in the Hogansburg, Malone and Kalurah soils.

Muskellunge soils have more clay throughout the subsoil and substratum than the Hailesboro soils. Muskellunge soils have more clay in the surface and subsoil than Swanton and Pinconning soils.

Typical pedon of Muskellunge silty clay loam, 0 to 3 percent slopes, in the Town of Beekmantown, about 2,200 feet east of Moffitt Road and 1,100 feet south of Pardy Road (at the dead end portion) in a cornfield; USGS Beekmantown topographic quadrangle, lat. 44 degrees 45 minutes 30 seconds N. and long. 73 degrees 26 minutes 7 seconds W., NAD 1927:

Ap—0 to 9 inches, dark brown (10YR 3/3) silty clay loam; light brownish gray (10YR 6/2) dry; weak course and medium blocky structure parting to weak very fine subangular blocky; firm; common very fine roots; slightly alkaline (limed); abrupt smooth boundary.

BE—9 to 16 inches, dark grayish brown (10YR 4/2) silty clay; moderate very fine angular blocky structure; firm; common very fine roots; many fine faint dark yellowish brown (10YR 4/4) masses of iron oxides; neutral; clear smooth boundary.

Bt1—16 to 23 inches, brown (10YR 5/3) silty clay; strong fine angular blocky structure; firm; common very fine roots; grayish brown (10YR 5/2) on faces of peds; common fine and medium distinct dark yellowish brown (10YR 4/4) masses of iron oxides; neutral; clear wavy boundary.

Bt2—23 to 38 inches, brown (10YR 5/3) silty clay; strong medium and fine angular blocky structure; firm; few very fine roots; gray (10YR 5/1) on faces of peds; few fine distinct yellowish brown (10YR 5/6) and many fine distinct dark yellowish brown (10YR 4/4) masses of iron oxides; slightly alkaline; abrupt smooth boundary.

Cg1—38 to 45 inches, brown (7.5YR 4/2) silty clay; weak thick platy structure; firm; gray (10YR 5/1) on faces of platy aggregates; few fine distinct grayish brown (10YR 5/2) areas of iron depletion and many medium distinct yellowish brown (10YR 5/6) masses of iron oxides; slightly alkaline; abrupt smooth boundary.

Cg2—45 to 72 inches, dark yellowish brown (10YR 4/4) clay; massive; very firm; gray (5Y 5/1) on faces of common vertical desiccation cracks; common medium and course distinct yellowish brown (10YR 5/6) masses of iron oxides; slightly alkaline, slightly effervescent.

The thickness of the solum ranges from 20 to 40 inches. Depth to carbonates ranges from 20 to 70 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Gravel ranges from 0 to 5 percent by volume in the solum and 0 to 10 percent in the substratum.

The Ap or A horizon has hue of 10YR or 2.5Y, value of 2 to 4 and chroma of 1 to 3. It is silt loam or silty clay loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The E or BE horizon has hue of 10YR or 2.5Y, value of 4 or 5 and chroma of 1 to 3. Texture is silt loam or silty clay loam in the fine earth fraction, and also, includes silty clay in BE horizons. Reaction ranges from strongly acid to slightly alkaline.

The Bt horizon has hue of 7.5YR to 2.5Y, value of 4 to 6 and chroma of 2 to 4. Texture is silty clay loam, silty clay or clay within the range of 35 to 60 percent clay. Reaction ranges from strongly acid to slightly alkaline.

The C horizon has hue of 7.5YR to 5Y, value of 3 to 5 and chroma of 1 to 4. Texture is silty clay or clay in the fine earth fraction. Varves may occur in the lower part with silt and very fine sand textures included. Reaction ranges from neutral to moderately alkaline.

Naumburg Series

The Naumburg series consists of very deep, somewhat poorly drained and poorly drained soils on footslopes, deltas and outwash plains. These soils formed in sandy deposits. Slopes range from 0 to 3 percent.

The Naumburg soils are on the landscape near the Adams, Croghan, Searsport, Beseman and Adirondack soils. Naumburg soils have redoximorphic features in the albic or upper spodic horizons, whereas these features are absent in Adams and Croghan soil profiles. Naumburg soils have a spodic horizon which is absent in very poorly drained Searsport and Beseman soils. The Naumburg soils do not have as much silt and clay, and lack dense substrata in comparison to Adirondack soils.

Typical pedon of Naumburg sand, 0 to 3 percent slopes, in the Town of North Elba, about 1 mile south of the village of Saranac Lake, adjacent to railroad line, about 300 feet south of intersection with NY 86 in a wooded area; USGS Saranac Lake topographic quadrangle, lat. 44 degrees 18 minutes 14 seconds N. and long. 74 degrees 6 minutes 38 seconds W., NAD 1927:

Oe—0 to 2 inches, dark reddish brown (5YR 3/2) moderately decomposed needles and forest litter.

Oa—2 to 3 inches, black (5YR 2/1) highly decomposed organic matter; very strongly acid; abrupt smooth boundary.

E—3 to 7 inches, light gray to gray (10YR 6/1) sand; massive; very friable; common fine roots; very strongly acid; abrupt wavy boundary.

Bh—7 to 8 inches, black to dark reddish brown (5YR 2/1-2/2) loamy fine sand; weak fine granular structure; very friable, smeary; common fine roots; very strongly acid; abrupt wavy boundary.

Bs1—8 to 10 inches, reddish brown (2.5YR 4/4) loamy sand; weak fine granular structure; very friable, smeary; few fine roots; very strongly acid; abrupt wavy boundary.

Bs2—10 to 18 inches, yellowish red (5YR 4/6) loamy sand; weak fine granular structure; very friable; slightly smeary; few fine roots; common medium distinct dark reddish brown (2.5YR 3/4) areas of iron depletion; strongly acid; clear wavy boundary.

Bs3—18 to 28 inches, yellowish red (5YR 5/6) loamy sand; weak fine subangular blocky structure; very friable; common fine distinct light yellowish brown (10YR 6/4) areas of iron depletion; strongly acid; clear wavy boundary.

BC—28 to 33 inches, strong brown (7.5YR 5/6) loamy fine sand; massive; very friable; common fine distinct light yellowish brown (10YR 6/4) areas of iron depletion; moderately acid; clear smooth boundary.

C1—33 to 49 inches, pale brown (10YR 6/3) loamy fine sand; massive; friable; common fine distinct gray (10YR 5/1) areas of iron depletion; moderately acid; clear smooth boundary.

C2—49 to 72 inches, grayish brown (10YR 5/2) fine sand; massive; friable; slightly acid.

The thickness of solum ranges from 18 to 42 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments range from 0 to 5 percent by volume throughout.

Some pedons have a leaf or organic layer up to 2 inches thick composed of an undecomposed mat of twigs, leaves, and needles.

The Oa horizon has hue of 5YR to 10YR (or it is neutral), with value of 2 or 3, and chroma of 0 to 4. The organic materials are usually well decomposed material derived predominantly from woody vegetation. Reaction is extremely acid to strongly acid.

Some pedons have an A or Ap horizon with hue of 5YR to 10YR, value of 2 to 5, and chroma of 1 to 3. It is fine sandy loam, sandy loam, loamy fine sand, or loamy sand in the fine earth fraction. Reaction ranges extremely acid to strongly acid.

The E horizon has hue of 5YR to 10YR, value of 5 to 7, and chroma of 1 to 3. Texture is fine sandy loam, sandy loam, loamy fine sand, or loamy sand in the fine earth fraction. Reaction is extremely acid to strongly acid.

The Bh horizon, if present, has hue of 2.5YR to 10YR, value of 2 or 3, and chroma of 1 to 3. Texture ranges from loamy fine sand to sand in the fine earth fraction. Reaction is extremely acid to strongly acid.

The Bhs horizon has hue 2.5YR to 10YR, value of 2 to 4, and chroma of 2 to 4. Texture ranges from loamy fine sand to sand in the fine earth fraction. Reaction is extremely acid to strongly acid.

The Bs horizon has hue of 5YR or 7.5YR, value of 3 to 5, and chroma of 3 to 6. Texture ranges from loamy fine sand to sand in the fine earth fraction. Reaction is extremely acid to strongly acid.

The BC horizon has hue of 5YR to 2.5Y, value of 3 to 6, and chroma of 2 to 6. Texture ranges from loamy fine sand to sand in the fine earth fraction. Reaction is extremely acid to strongly acid.

The C horizon has hue of 7.5YR to 5Y, value of 3 to 6, and chroma of 1 to 4. Texture ranges from loamy fine sand to coarse sand in the fine earth fraction. Reaction is very strongly acid to slightly acid.

Neckrock Series

The Neckrock series consists of moderately deep, well drained soils on limestone (or dolomitic limestone) bedrock controlled lowlands. These soils formed in loamy glacial till deposits. Slopes range from 0 to 15 percent.

The Neckrock soils are in a drainage sequence with the somewhat poorly drained Ogdensburg soils. Neckrock soils are also near the Summerville, Hogansburg, Grenville, Coveytown and Muskellunge soils on the landscape. Moderately deep Neckrock soils are on similar landforms as the shallow Summerville soils. The Neckrock soils have bedrock within 40 inches deep whereas Hogansburg, Grenville, Coveytown and Muskellunge soils are very deep to bedrock.

Typical pedon of Neckrock loam, in a Neckrock-Summerville complex, strongly sloping, very rocky, Town of Chazy, about 1.2 miles northeast of intersection of Old Route 348 and Ashley Road, and about 50 feet northwest of Route 348 in a wooded area; USGS Beekmantown topographic quadrangle, lat. 44 degrees 52 minutes 4 seconds N. and long. 73 degrees 27 minutes 21 seconds W., NAD 1927:

A—0 to 9 inches, very dark grayish brown (10YR 3/2) loam; light brownish gray (10YR 6/2) dry; moderate fine and very fine subangular blocky structure parting to weak fine and very fine granular; very friable; many fine, very fine and medium, and few coarse roots; 10 percent rock fragments (including 5 percent cobbles); moderately acid; clear smooth boundary.

EB—9 to 17 inches, brown (10YR 5/3) and yellowish brown (10YR 5/4) loam; weak medium subangular blocky structure parting to moderate fine subangular blocky; friable; many very fine, and common medium and fine roots; 10 percent rock fragments; slightly acid; clear smooth boundary.

Bt—17 to 27 inches, yellowish brown and dark yellowish brown (10YR 5/4 and 4/4) cobbly loam; weak medium subangular blocky structure parting to moderate fine subangular blocky; common clay films on faces of peds and in pores; friable; many fine, and common medium and very fine roots; common fine and very fine, and few medium pores; 15 percent rock fragments (including 5 percent cobbles); neutral; clear smooth boundary.

C—27 to 32 inches, brown (10YR 4/3) very gravelly loam; massive; firm; few fine roots; few fine and medium pores; 40 percent rock fragments (including 5 percent cobbles); strongly effervescent, moderately alkaline; abrupt irregular boundary.

2R—32 inches, dark gray (10YR 4/1) fractured limestone bedrock.

The thickness of the solum and depth to bedrock is 20 to 40 inches. Carbonates occur within 6 inches of bedrock contact in most pedons. Clay content in the argillic horizon ranges from 18 to 22 percent. Rock fragments range from 5 to 25 percent by volume in the solum, and from 10 to 45 percent in the substratum.

The A horizon has hue of 10YR, value of 2 to 4 and chroma of 2 or 3. Texture is silt loam, loam or fine sandy loam in the fine earth fraction. Unless limed, reaction ranges from moderately acid to slightly alkaline.

The EB or BE horizon has hue of 10YR, value of 4 to 6 and chroma of 2 or 3 in the E part, and chroma of 4 to 6 in the B part. Texture is loam or fine sandy loam in the fine earth fraction. Reaction ranges from moderately acid to slightly alkaline.

The Bt horizon has hue of 10YR or 2.5Y, value of 4 or 5 and chroma of 2 to 6 (with chroma of 2 being inherent parent material color). Texture is silty clay loam, silt loam or loam in the fine earth fraction. Reaction ranges from moderately acid to slightly alkaline.

The BC horizon, if present, has hue of 10YR or 2.5Y, value of 4 or 5 and chroma of 2 to 4 (with chroma of 2 being inherent parent material color). Few faint redox concentrations may be present. Texture is silty clay loam, silt loam or loam in the fine earth fraction. Reaction ranges from neutral to moderately alkaline.

The C horizon has hue of 10YR or 2.5Y, value of 3 or 4 and chroma of 2 to 4. Few faint or distinct redox concentrations may be present. Texture is fine sandy loam, loam or silt loam in the fine earth fraction. Reaction ranges from neutral to moderately alkaline.

Nicholville Series

The Nicholville series consists of very deep, moderately well drained soils on glacial lake plains and low benches in the uplands. These soils formed in wind or water deposited material having a high content of silt and very fine sand. Slopes range from 0 to 8 percent.

The Nicholville soils are in a drainage sequence with the somewhat poorly drained Roundabout soils. The Nicholville soils are on landscapes near the Adams, Muskellunge, Hailesboro, Monadnock, and Schroon soils. Nicholville soils are finer textured than the sandy Adams soils, and they are coarser textured than the clayey Muskellunge and Hailesboro soils. Nicholville soils typically have more silt and very fine sand and less rock fragments than loamy Monadnock and Schroon soils.

Typical pedon of Nicholville very fine sandy loam, 3 to 8 percent slopes, in the Town of Beekmantown, 5/8 mile south of the junction of NY Route 22 and West Hill Road, then 0.25 mile east of Route 22 in a field, along a drainage ditch; USGS Plattsburgh topographic quadrangle, lat. 44 degrees 44 minutes 41 seconds N. and long. 73 degrees 27 minutes 52 seconds W., NAD 1927:

Ap—0 to 9 inches, very dark grayish brown (10YR 3/2) very fine sandy loam; weak fine granular stucture; very friable; common medium, fine, and very fine roots; few medium, and common fine and very fine pores; moderately acid; abrupt smooth boundary.

Bs1—9 to 12 inches, dark brown (7.5YR 3/4) very fine sandy loam; weak medium subangular blocky structure; very friable; common fine and very fine roots; common fine and very fine pores; moderately acid; abrupt smooth boundary.

Bs2—12 to 20 inches, brown (7.5YR 4/4) very fine sandy loam; weak medium and fine subangular blocky structure; very friable; common fine and very fine roots; common fine and very fine pores; few fine faint strong brown (7.5YR 4/6) masses of iron oxides; moderately acid; clear wavy boundary.

C1—20 to 30 inches, brown (10YR 5/3) loamy very fine sand; single grain; very friable; few fine and very fine roots; common fine and very fine pores; common medium

distinct strong brown (7.5YR 4/6) and few fine distinct dark brown (7.5YR 3/4) soft masses of iron oxides; moderately acid; clear wavy boundary.

C2—30 to 34 inches, dark brown (10YR 4/3) loamy fine sand; single grain; very friable; few fine and very fine pores; few fine distinct brown (7.5YR 4/4) masses of iron oxides and few fine distinct dark brown (7.5YR 3/2) areas of iron depletion; moderately acid; clear smooth boundary.

2C—34 to 72 inches, grayish brown (10YR 5/2) loamy very fine sand; massive; friable; few fine and very fine pores; many coarse distinct brown (7.5YR 4/4) and common fine distinct strong brown (7.5YR 4/6) masses of iron oxides; moderately acid.

The thickness of the solum ranges from 12 to 38 inches. Redoximorphic features occur between 20 to 30 inches below the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments range from 0 to 10 percent by volume throughout the soil.

The Ap or A horizon has hue of 7.5YR or 10YR, value of 3 or 4, and chroma of 2 or 3. It is silt loam or very fine sandy loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid, unless limed.

In some undisturbed areas, the soil typically has an O horizon, an E horizon, and a Bh or Bhs horizon. These are usually destroyed by plowing.

The Bs horizon has hue of 5YR or 7.5YR, value of 3 to 5, and chroma of 2 to 4. It ranges from loamy very fine sand to silt loam in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid.

The 2C or C horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 2 to 4. The fine earth fraction ranges from silt loam to loamy fine sand in the fine earth fraction above a depth of 38 inches, and sandy loam or silt loam to very fine sand below. Reaction ranges from very strongly acid to slightly acid.

Northway Series

The Northway series are very deep, somewhat poorly drained soils on lake plains, beaches and outwash plains. They formed in outwash sands overlying loamy glacial till. Slopes range from 0 to 8 percent.

The Northway soils are in a drainage sequence with the moderately well drained Covertfalls soils. Northway soils are also near the Appleton, Massena, Covert, Pipestone, and Plainfield soils on the landscape. Northway soils have sandy surface and subsoil horizons which are lacking in Appleton and Massena soils. The Northway soils have up to 40 inches of sandy over loamy material whereas Covert, Pipestone and Plainfield soils are very deep sands.

Typical pedon of Northway loamy fine sand, 0 to 3 percent slopes, in the Town of Peru, about 0.9 mile north-northeast of the intersection of Route 22 and Brand Hollow Road, and about 1,500 feet west of NY Route 22 in a pasture; USGS Peru topographic quadrangle, lat. 44 degrees 37 minutes 1 second N. and long. 73 degrees 30 minutes 8 seconds W., NAD 1927:

Ap1—0 to 4 inches, very dark grayish brown (10YR 3/2) loamy fine sand; brown (10YR 5/3) dry; weak fine and medium granular structure; very friable; many fine and very fine roots; 1 percent rock fragments; moderately acid; clear smooth boundary.

Ap2—4 to 8 inches, very dark grayish brown (10YR 3/2) loamy fine sand; brown (10YR 5/3) dry; weak medium and coarse subangular blocky structure parting to weak fine and medium granular; friable; many fine and very fine roots; 1 percent rock fragments; moderately acid; abrupt smooth boundary.

Bs—8 to 12 inches; mixed brown (7.5YR 4/4) and dark brown (7.5YR 3/4) fine sand; weak medium and coarse subangular blocky structure; very friable; common fine roots; few medium, and common fine pores; few medium and coarse prominent

yellowish red (5YR 4/6) and few medium prominent pale brown (10YR 6/3) soft masses of iron oxides; moderately acid; clear wavy boundary.

BC1—12 to 20 inches, light yellowish brown (2.5Y 6/3) fine sand; single grain; loose; common fine roots; many medium and coarse prominent strong brown (7.5YR 4/6) and few medium prominent strong brown (7.5 YR 5/6) soft masses of iron oxides; slightly acid; clear wavy boundary.

BC2—20 to 32 inches, light yellowish brown (2.5Y 6/3) fine sand; single grain; loose; few fine roots; common medium and coarse prominent strong brown (7.5YR 5/6) soft masses of iron oxides; 1 percent rock fragments; neutral; abrupt smooth boundary.

2Cg—32 to 42 inches, light gray (10YR 6/1) upper part and gray (10YR 5/1) lower part, gravelly loam; weak medium and thin platy structure; friable; many medium prominent yellowish brown (10YR 5/6) and dark yellowish brown (10YR 4/4) soft masses of iron oxides (common in lower part); 20 percent rock fragments; slightly alkaline; gradual wavy boundary.

2Cdg—42 to 72 inches, dark gray (10YR 4/1) gravelly loam; moderate medium and thin platy structure; firm; few medium distinct dark yellowish brown (10YR 4/4) soft masses of iron oxides; 25 percent rock fragments; strongly effervescent, moderately alkaline.

The thickness of the solum is 18 to 40 inches. Depth to carbonates ranges from 30 to 80 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Rock fragments range from 0 to 10 percent by volume in the solum and from 10 to 35 percent in the substratum.

The Ap horizons have hue of 7.5YR or 10YR, value of 2 to 4 and chroma of 2 or 3. Undisturbed A horizons have value of 2 or 3 and chroma of 1 to 3. Texture is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The Bs horizons have hue of 5YR or 7.5YR, value of 3 to 5 and chroma of 4 to 6. Texture is dominantly fine sand or sand in the fine earth fraction, but loamy fine sand is also within the range. Reaction ranges from strongly acid to neutral.

The BC horizons have hue of 10YR or 2.5Y, value of 4 to 6 and chroma of 2 to 4. Texture is fine sand or sand in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The 2C horizons have hue of 10YR or 2.5Y, value of 4 to 6 and chroma of 1 to 3. Texture is loam or fine sandy loam in the fine earth fraction and less commonly silt loam. Reaction ranges from slightly acid to moderately alkaline.

Occur Series

The Occur series are very deep, moderately well drained soils on glacial lake plains and shorelines. These soils formed in outwash sands and water-worked sediments overlying loamy glacial till. Slopes range from 0 to 8 percent.

The Occur soils are in a drainage sequence with the somewhat poorly drained Coveytown and the very poorly drained Cook soils. The Occur soils are also associated on the landscape with the Adams, Croghan, Bice, Schroon, and Kalurah soils. The Occur soils have loamy material within 40 inches whereas Adams and Croghan soils are very deep sands. Occur soils differ from Bice, Schroon and Kalurah soils in having more sand and less clay throughout the surface and subsoil.

Typical pedon of Occur loamy sand, 3 to 8 percent slopes, in the Town of Mooers, about 1,700 feet southwest of the intersection of Tappen Road and Gilbert Road, and 300 feet south of Gilbert Road in a cornfield; USGS Mooers topographic quadrangle, 44 degrees 56 minutes 29 seconds north Latitude and 73 degrees 36 minutes 34 seconds west Longitude, NAD 1927:

Ap—0 to 6 inches, very dark grayish brown (10YR 3/2) loamy sand; light brownish gray (10YR 6/2) dry; weak medium subangular blocky structure parting to weak medium granular; very friable; common medium, fine and very fine roots; 5 percent rock fragments; slightly acid; abrupt smooth boundary.

Bs1—6 to 8 inches, brown (7.5YR 4/4) loamy sand; weak medium and coarse subangular blocky structure; friable; common fine and very fine roots; 5 percent rock fragments; 5 to 10 percent dark brown (7.5YR 3/4) ortstein masses; moderately acid; clear smooth boundary.

Bs2—8 to 13 inches, strong brown (7.5YR 5/6) loamy sand; weak medium subangular blocky structure; friable; few fine and common very fine roots; few strong brown (7.5YR 4/6) ortstein masses in lower part; 10 percent rock fragments; moderately acid; clear smooth boundary.

BC—13 to 21 inches, yellowish brown (10YR 5/4) cobbly loamy sand; weak medium subangular blocky structure; very friable; few very fine roots; few fine distinct yellowish brown (10YR 5/8) soft masses of iron oxides in lower part; 15 percent rock fragments; slightly acid; clear smooth boundary.

C1—21 to 29 inches, brown (10YR 5/3) loamy sand; single grain; very friable; few very fine roots; few medium faint yellowish brown (10YR 5/4) soft masses of iron oxides; 5 percent rock fragments; neutral; abrupt smooth boundary.

2Cg—29 to 72 inches, grayish brown (2.5Y 5/2) loam; massive; firm; many medium distinct gray (10YR 5/1) areas of iron depletion, many medium distinct yellowish brown (10YR 5/4) soft masses of iron oxides; 10 percent rock fragments; neutral

The thickness of the solum is 18 to 40 inches. Depth to carbonates is greater than 27 inches. Redoximorphic features occur within 30 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments range from 0 to 15 percent by volume in the surface layer, 0 to 30 percent in the subsoil, and from 5 to 35 percent in the substratum.

Some pedons have a thin Oi or Oe horizon.

The Ap horizon has hue of 7.5YR or 10YR, value of 2 or 3 and chroma of 2 or 3. Texture is loamy fine sand or loamy sand, and less commonly fine sand or sand in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The E horizon, if present, has hue of 7.5YR or 10YR, value of 5 or 6 and chroma of 1 or 2. Texture is loamy fine sand, fine sand, loamy sand or sand in the fine earth fraction. Reaction ranges from strongly acid or moderately acid unless limed.

The Bhs horizon, if present, has hue of 5YR or 7.5YR, value and chroma of 3. Texture is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction ranges from strongly acid or moderately acid.

The Bs horizon has hue of 5YR or 7.5YR, value of 4 or 5, and chroma of 4 to 6. Texture is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction ranges from strongly acid or moderately acid.

The BC horizon, if present, has hue of 10YR, value of 4 to 6 and chroma of 3 or 4. Texture is loamy fine sand, loamy sand, fine sand, or sand in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The C horizon, if present, has hue of 10YR or 2.5Y, value of 4 or 5 and chroma of 2 to 4. Texture is loamy fine sand, loamy sand, fine sand, or sand in the fine earth fraction. Reaction ranges from moderately acid to moderately alkaline.

The 2C horizon has hue of 10YR or 2.5Y, value of 4 to 6 and chroma of 2 to 4. Texture is loam or fine sandy loam in the fine earth fraction. Reaction ranges from moderately acid to moderately alkaline.

Ogdensburg Series

The Ogdensburg series consists of moderately deep, somewhat poorly drained soils on bedrock-controlled lowlands. These soils formed in loamy, calcareous glacial till over limestone or dolomitic limestone bedrock. Slope ranges from 0 to 8 percent.

The Ogdensburg soils are near the Grenville, Hogansburg, Malone, Runeberg, Neckrock and Summerville soils on the landscape. Ogdensburg soils have bedrock at 20 to 40 inches deep whereas Grenville, Hogansburg, Malone and Runeberg soils are very deep. The Ogdensburg soils have redoximorphic features within 20 inches of the mineral soil surface which are generally absent in Neckrock and Summerville soils.

Typical pedon of Ogdensburg silt loam, 0 to 8 percent slopes, in the Town of Champlain, about 0.8 mile northeast of the intersection of Old Route 11 and 975 feet north of Prospect Hill Road, then about 390 feet west of farm road in partially wooded pasture; USGS Champlain topographic quadrangle, lat. 44 degrees 59 minutes 44 seconds N. and long. 73 degrees 26 minutes 7 seconds W., NAD 1927:

Ap—0 to 9 inches, very dark grayish brown (10YR 3/2) silt loam; grayish brown (10YR 5/2) dry; weak fine and medium granular structure; very friable; many very fine roots; 10 percent rock fragments (including 5 percent cobbles and stones); neutral; abrupt smooth boundary.

Bw—9 to 15 inches, brown (10YR 5/3) loam; weak medium subangular blocky structure; very friable; common very fine roots; few fine distinct yellowish brown (10YR 5/6) soft masses of iron oxides; 10 percent rock fragments; neutral; clear smooth boundary.

Bg—15 to 26 inches, grayish brown (10YR 5/2) gravelly loam; weak very thick platy structure parting to weak medium subangular blocky; friable; few very fine roots; many medium and course distinct light gray (10YR 6/1) areas of iron depletion, and many fine and medium distinct yellowish brown (10YR 5/4) soft masses of iron oxides; 16 percent rock fragments; slightly alkaline, strongly effervescent; clear smooth boundary.

C1—26 to 32 inches, brown (10YR 5/3) gravelly loam; massive; friable; few fine and medium distinct gray (10YR 5/1) areas of iron depletion, and few fine distinct yellowish brown (10YR 5/6) masses of iron oxides; 35 percent rock fragments (including 5 percent cobbles); moderately alkaline, strongly effervescent; clear wavy boundary.

C2—32 to 38 inches, light olive brown (2.5Y 5/3) very gravelly loam; massive; friable; 40 percent rock fragments (including 10 percent cobbles); moderately alkaline, strongly effervescent; abrupt smooth boundary.

2R—38 inches, dark gray, thinly bedded, limestone bedrock.

The thickness of solum ranges from 15 to 34 inches. Depth to carbonates usually corresponds to depth of solum; however, carbonates are absent in some pedons. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock ranges from 20 to 40 inches. Rock fragments range from 2 to 35 percent in the Ap, Bw and Bg horizons and from 15 to 50 percent in the BC and C horizons.

The Ap horizon has hue of 10YR or 2.5Y, value of 2 or 3, and chroma of 1 or 2. Dry color value is 5. It is sandy loam, fine sandy loam, silt loam or loam in the fine earth fraction. Reaction ranges from moderately acid to neutral.

The Bw horizon has hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 3 or 4. It is sandy loam, fine sandy loam or loam in the fine earth fraction. Thin subhorizons of silt loam occur in some pedons. Reaction ranges from slightly acid to slightly alkaline.

The Bg horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 or 2. It is sandy loam, fine sandy loam, or loam in the fine earth fraction. Thin subhorizons of silt loam occur in some pedons. Reaction ranges from slightly acid to moderately alkaline.

The BC and C horizons, if present, are neutral or have hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 0 to 4. Texture is sandy loam, fine sandy loam, loam, or silt loam in the fine earth fraction. Reaction ranges from neutral to moderately alkaline.

Peasleeville Series

The Peasleeville series are very deep, somewhat poorly drained soils on toeslopes, slight depressions and smooth till plains These soils formed in loamy glacial till. Slopes range from 0 to 8 percent.

The Peasleeville soils are in a drainage sequence with the well drained Bice soils, the moderately well drained Schroon soils, and the poorly drained Lyonmounten soils. Peasleeville soils are also near the Chazy, Kalurah, Malone, Coveytown and Adirondack soils on the landscape. The Peasleeville soils are very deep whereas Chazy soils have bedrock between 20 and 40 inches deep. The Peasleeville soils have redoximorphic features within 20 inches of the mineral soil surface while Kalurah soils have these features slightly deeper. Peasleeville soils have free carbonates deeper than 50 inches while Malone soils typically have carbonates at more shallow depths. The Peasleeville soils do not have sandy surface and subsoil textures as in the Coveytown soils. Peasleeville soils lack dense, brittle substrata as is characteristic of Adirondack soils.

Typical pedon of Peasleeville loam, 0 to 3 percent slopes, in the Town of Clinton, 1,800 feet south of intersection of Campbell Road and Gagnier Road, and 1,200 feet west of Campbell Road in a pasture; USGS Churubusco topographic quadrangle, lat. 44 degrees, 54 minutes, 3 seconds N. and long. 73 degrees, 58 minutes, 15 seconds W., NAD 1927:

Ap1—0 to 7 inches, very dark gray (10YR 3/1) loam, light brownish gray (10YR 6/2) dry; weak medium and fine granular structure; very friable; many fine and very fine, and few medium roots; 10 percent rock fragments; neutral; clear smooth boundary.

Ap2—7 to 11 inches, very dark grayish brown (10YR 3/2) gravelly loam; light brownish gray (10YR 6/2) dry; moderate medium subangular blocky structure parting to weak fine granular; friable; common fine and very fine roots; 15 percent rock fragments; moderately acid; abrupt smooth boundary.

BE—11 to 22 inches, brown and dark brown (10YR 5/3 and 4/3) gravelly fine sandy loam; weak medium and coarse subangular blocky structure parting to weak thin platy; friable; common fine and very fine roots; common fine and medium pores; grayish brown (10YR 5/2) on faces of peds; common fine and medium faint yellowish brown (10YR 5/4) and few fine distinct brown (7.5YR 4/4) soft masses of iron oxides; 15 percent rock fragments; moderately acid; clear wavy boundary.

2Bw—22 to 32 inches, brown and dark brown (7.5YR 5/3 and 4/3) gravelly loam; moderate very coarse prismatic structure parting to weak medium and coarse subangular blocky; few patchy clay films in pores; friable (firm in place); few fine roots; common fine and few medium pores; light brownish gray (10YR 6/2) on faces of prisms; few fine faint yellowish brown (10YR 5/4) and few fine distinct yellowish brown (10YR 5/6) soft masses of iron oxides; 25 percent rock fragments; slightly acid; clear wavy boundary.

2BCg—32 to 42 inches, dark grayish brown (10YR 4/2) gravelly loam; weak thin and medium platy structure; friable (firm in place); few fine roots; common fine and few medium pores; common medium and coarse distinct brown (7.5YR 5/2) areas of iron depletion, and strong brown (7.5YR 5/6) soft masses of iron oxides; 30 percent rock fragments (including 5 percent cobbles); neutral; gradual wavy boundary.

2Cg—42 to 72 inches, dark grayish brown (10YR 4/2) and dark yellowish brown (10YR 4/4) gravelly loam; massive; friable (firm in place); common fine and medium pores; few fine and medium faint yellowish brown (10YR 5/4) and few fine and medium distinct yellowish brown (10YR 5/6) soft masses of iron oxides; 30 percent rock fragments (including 5 percent cobbless and stones); neutral.

The thickness of the solum ranges from 24 to 50 inches. Depth to carbonates is greater than 50 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is greater 60 inches. Rock fragments range from 0 to 25 percent by volume in the surface layer, and from 10 to 35 percent in the subsoil and substratum.

The Ap horizons have hue of 10YR, value of 3, and chroma of 1 to 3. Unplowed A horizons have value of 2 or 3, and chroma of 1 or 2. Texture is fine sandy loam or loam in the fine earth fraction. Unless limed, reaction ranges from strongly acid to slightly acid.

The BE horizon has hue of 7.5YR to 2.5Y, value of 4 to 6 and chroma of 2 to 4. Texture is fine sandy loam or loam in the fine earth fraction. Reaction ranges from strongly acid to slightly acid.

The Bw or 2Bw horizon has hue of 7.5YR or 10YR, value of 4 to 6 and chroma of 2 to 4. Texture is fine sandy loam or loam in the fine earth fraction. Reaction ranges from strongly acid to slightly acid.

The BC or 2BC horizon has hue of 10YR or 2.5Y, value of 3 to 6 and chroma of 2 or 3. Texture is sandy loam, fine sandy loam or loam in the fine earth fraction. Reaction ranges from strongly acid to slightly acid.

The C or 2C horizon has hue of 10YR or 2.5Y, value of 4 to 6 and chroma of 2 to 4. Texture is sandy loam, fine sandy loam or loam in the fine earth fraction. Reaction ranges from moderately acid to neutral.

Pinconning Series

The Pinconning series consists of very deep, very poorly drained soils on glacial lake plains, upland depressions and swales between glacial lake beach deposits. These soils formed in loamy sands over lacustrine silt and clay. Slopes range from 0 to 2 percent.

The Pinconning soils are in a drainage sequence with moderately well drained Flackville soils and in close association with somewhat poorly drained Swanton soils. Pinconning soils have more sand in the surface and subsoil than the Swanton soils. The Pinconning soils are also adjacent in the landscape to the Sciota, Wainola, Deinache, Adjidaumo, Wonsqueak, and Kalurah soils. Pinconning soils have 20 to 40 inches of sandy material over clay whereas Sciota, Wainola and Deinache have deeper sand deposits. Pinconning soils differ from Adjidaumo soils in having a sandy mantle whereas Adjidaumo soils generally lack sandy material. The Pinconning soils do not have a thick organic surface and subsurface that is characteristic of Wonsqueak soils. Finally, Pinconning soils generally lack rock fragments which are characteristic of loamy Kalurah soils formed in glacial till.

Typical pedon of Pinconning mucky loamy fine sand, in the Town of Champlain, about 1,600 feet east of Angelville Road and McBride Road intersection, and 500 feet north of McBride Road in a hayfield; USGS Mooers topographic quadrangle, lat. 44 degrees 55 minutes 4 seconds N. and long. 73 degrees 31 minutes 5 seconds W., NAD 1927:

Ap—0 to 9 inches, very dark brown (10YR 2/2) mucky loamy fine sand, dark grayish brown (10YR 4/2) dry; moderate fine and very fine granular structure; very friable; many very fine, and common fine roots; neutral; abrupt smooth boundary.

Cg1—9 to 11 inches, gray (10YR 6/1) fine sand; weak medium and thick platy structure; very friable; common very fine roots; few fine and medium distinct brownish yellow (10YR 6/6) soft masses of iron oxides; slightly alkaline; clear smooth boundary.

Cg2—11 to 22 inches, 60 percent light gray (10YR 7/1) and grayish brown (10YR 5/2) fine sand; moderate thick and medium platy structure; very friable; few very fine roots; few fine and medium distinct brownish yellow (10YR 6/6) and yellowish

brown (10YR 5/6) soft masses of iron oxides; slightly alkaline; clear smooth boundary.

Cg3—22 to 27 inches, gray (10YR 5/1) loamy fine sand; massive; very friable; common fine and very fine, and few medium tubular pores; common medium distinct yellowish brown (10YR 5/6) and common medium and coarse distinct yellowish brown (10YR 5/4) soft masses of iron oxides; 1 percent cobbles; slightly alkaline; clear smooth boundary.

Cg4—27 to 36 inches, gray (10YR 5/1) loamy fine sand; massive; very friable; common fine and medium tubular pores; few medium distinct yellowish brown (10YR 5/4) soft masses of iron oxides; 1 percent cobbles; slightly alkaline; abrupt smooth boundary.

2Cg5—36 to 60 inches, dark gray (10YR 4/1) varved silt loam and silty clay; weak thick and very thick varves; firm; many medium and common fine tubular pores; common medium distinct dark yellowish brown (10YR 4/4 and 4/6) soft masses of iron oxides; slightly effervescent, slightly alkaline; clear smooth boundary.

2Cg6—60 to 72 inches, dark gray (N 4/0) silty clay; massive; firm; few very fine pores; common coarse distinct dark yellowish brown (10YR 4/6) and strong brown (7.5YR 4/6) soft masses of iron oxides; slightly effervescent, slightly alkaline.

The depth to contrasting material ranges from 20 to 40 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments are one percent or less by volume.

The Ap or A horizon has hue of 10YR or 2.5Y, value of 2 or 3 and chroma of 1 or 2. Texture is sand, fine sand, loamy sand, loamy fine sand, sandy loam or fine sandy loam with or without mucky analogue. Reaction is moderately acid to slightly alkaline.

The Cg horizon has hue of 10YR, value of 3 to 6 and chroma of 1 or 2. Texture is sand, fine sand, loamy sand, loamy fine sand in the fine earth fraction. Reaction is slightly acid to slightly alkaline.

The 2C horizon has hue of 10YR to 5Y (or it is neutral), value of 4 to 7 and chroma of 0 to 4. Texture is silty clay loam, silty clay or clay in the fine earth fraction. Reaction is slightly alkaline or moderately alkaline.

Pipestone Series

The Pipestone series consists of very deep, somewhat poorly drained soils on stream terraces, deltas, outwash plains, and glacial lake beaches. These soils were formed in sandy material. Slopes range from 0 to 3 percent.

The Pipestone soils occur in a drainage sequence with the excessively drained Grattan soils and the moderately well drained Covert soils. Pipestone soils occur on landscapes near the Junius, Gougeville, Shaker, Covertfalls, and Northway soils. The Pipestone soils have more orstein or redder subsoil layers than the Junius and Gougeville soils. Pipestone soils are sandy whereas Shaker soils have loamy material over clay and silt. Pipestone soils are very deep sands in contrast to Covertfalls and Northway soils which have a loamy substratum within 40 inches of the surface.

Typical pedon of Pipestone fine sand, in the Town of Peru, about 1.1 miles west of intersection of US Route 9 and South Junction Road, and 150 feet south of South Junction Road in a woodlot; USGS Plattsburgh topographic quadrangle, lat. 44 degrees 37 minutes 58 seconds N. and long. 73 degrees 28 minutes 10 seconds W., NAD 1927:

E1—0 to 5 inches, brown (7.5YR 5/2) fine sand; weak fine granular structure; very friable; common fine and very fine, and few coarse roots; moderately acid; abrupt smooth boundary.

E2—5 to 7 inches, pale brown (10YR 6/3) fine sand; very weak medium subangular blocky structure; very friable; few very fine and medium roots; very strongly acid; abrupt broken boundary.

Bs—7 to 19 inches, brown (7.5YR 4/4) fine sand; single grain; common 1/4 to 1/2 inch distinct dark reddish brown (5YR 3/4) nodules; very friable; few fine and very fine roots; common fine faint brown (7.5YR 5/4) soft masses of iron oxides; strongly acid; clear wavy boundary.

BC—19 to 26 inches, light yellowish brown (10YR 6/4) sand; single grain; very friable; few very fine roots; common medium distinct strong brown (7.5YR 5/6) and brown (7.5YR 4/4) soft masses of iron oxides, and common coarse faint light brownish gray (10YR 6/2) areas of iron depletion; moderately acid; clear wavy boundary.

C—26 to 72 inches, brown (10YR 5/3) sand; single grain; loose; slightly acid.

The thickness of the solum ranges from 20 to 50 inches. Redoximorphic features occur in the spodic horizon within 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments range from 0 to 5 percent by volume throughout the soil.

The O horizon, if present, has hue of 7.5YR or 10YR, value of 2 and chroma of 2. It can be in any stage of decomposition. Reaction ranges from extremely acid to moderately acid.

The A or Ap horizon, when present, has hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 1 or 2. It is sand, fine sand, loamy sand, or loamy fine sand in the fine earth fraction. Reaction ranges from extremely acid to neutral.

The E horizon has hue of 7.5YR or 10YR, value 5 to 7, and chroma of 1 to 3. It is sand, fine sand, loamy sand, or loamy fine sand in the fine earth fraction. Reaction ranges from extremely acid to slightly acid.

The Bhs horizon, when present, has hue of 5YR or 7.5YR, value of 3 and chroma of 3. It is sand, fine sand, loamy sand or loamy fine sand in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Bs horizon has hue of 5YR or 7.5YR, value of 3 or 4, and chroma of 4. If a Bhs is present, it has value 3 to 6, and chroma of 4 to 8. It is sand, fine sand, loamy sand, or loamy fine sand in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The BC horizon has hue of 10YR, value of 6 or 7, and chroma of 4 to 6. It is sand, fine sand, loamy sand, or loamy fine sand in the fine earth fraction. Reaction ranges from very strongly acid to neutral.

The C horizon has hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 2 to 6. It is sand, fine sand, coarse sand, or loamy coarse sand in the fine earth fraction. Reaction ranges from very strongly acid to neutral.

Plainfield Series

The Plainfield series consists of very deep, excessively drained soils on outwash plains, terraces, and deltas. These soils formed in sandy deposits. Slopes range from 0 to 70 percent.

Plainfield soils are in a drainage sequence with moderately well drained Deerfield soils, somewhat poorly drained Junius soils, and poorly drained Gougeville soils. Plainfield soils are near the Bombay, Appleton, Covertfalls, Grattan, Covert and Pipestone soils on the landscape. The Plainfield soils are very deep sands whereas Bombay and Appleton soils are formed in loamy glacial till. Plainfield soils lack a loamy substratum which is characteristic of Covertfalls soils. Plainfield soils lack the reddish brown spodic horizon of the Grattan, Covert and Pipestone soils.

Typical pedon of Plainfield loamy sand, 3 to 8 percent slopes, in the Town of Peru, 75 feet north of Fuller Road at a point 0.6 miles south of the intersection of Sullivan Road and Fuller Road near a sand pit; USGS Keeseville topographic quadrangle, lat. 44 degrees 33 minutes 12 seconds N. and long. 73 degrees 28 minutes 14 seconds W., NAD 1927:

Ap—0 to 8 inches, very dark grayish brown (10YR 3/2) loamy sand; weak medium and

fine subangular blocky structure parting to weak medium and fine granular; very friable, common very fine and fine roots; moderately acid; abrupt smooth boundary.

Bw1—8 to 17 inches, dark yellowish brown (10YR 4/6) sand; single grain; loose; few fine and common very fine roots; slightly acid; clear smooth boundary.

Bw2—17 to 23 inches, yellowish brown (10YR 5/6) sand; single grain; loose; few very fine and fine roots; slightly acid; clear smooth boundary.

C1—23 to 38 inches, yellowish brown (10YR 5/4) sand; single grain; loose; 5 percent rock fragments; slightly acid; clear smooth boundary.

C2—38 to 72 inches, pale brown (10YR 6/4) sand; single grain; loose; 5 percent rock fragments; slightly acid.

The thickness of the solum ranges from 12 to 34 inches. Depth to bedrock is greater than 60 inches. Rock fragments typically are pebbles and range from 0 to 15 percent throughout the pedon, but thin layers containing as much as 35 percent gravel are included.

The Ap horizon has hue of 10YR, value of 3 or 4, and chroma of 1 to 3. Where present, the A horizon has hue of 10YR, value of 2 or 3, and chroma of 1 to 3. Texture is loamy sand, loamy fine sand, sand, or fine sand in the fine earth fraction. Reaction ranges from moderately acid to neutral in the Ap, and very strongly acid to moderately acid in the A horizon.

The Bw horizon has hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 6. Texture is fine sand or sand in the fine earth fraction. Reaction ranges from very strongly acid to neutral.

The C horizon has hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 4 to 8. It is typically sand, but thin subhorizons of fine sand are allowed. Reaction ranges from very strongly acid to neutral.

Psammaquents

Psammaquents consist of very deep, somewhat poorly drained sandy sediments modified by human activity or deposited by Lake Champlain wave action. Slopes range from 0 to 3 percent.

Psammaquents occur in a complex with Udipsamments. They also commonly occur near the Deerfield, Croghan, Junius and Pipestone soils. Psammaquents are modified by human activity or lack soil development which is characteristic of these associated soils.

This taxonomic unit defines such miscellaneous areas as drainageways near airport runways, cut and fill areas, and beach deposits. Because the properties of Psammaqents vary from one place to another, a typical pedon is not described.

The surface layer is commonly 4 to 10 inches thick. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is more than 60 inches. Rock fragments range from 0 to 15 percent.

Generally, the surface layer has hue of 7.5YR to 2.5Y, value of 3 to 5 and chroma of 1 to 4. Texture ranges from sand to loamy fine sand in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid.

The substratum has hue of 10YR to 5Y, value of 3 to 6 and chroma of 1 to 4. It typically has faint or distinct redox concentrations and depletions. Texture ranges from coarse sand to loamy fine sand in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

Rawsonville Series

The Rawsonville series consists of moderately deep, well drained soils on high elevation, glaciated uplands. These soils were formed in loamy glacial till. Slopes range from 3 to 60 percent.

The Rawsonville soils are on the landscape near the Hogback, Mundalite, Worden and Sabattis soils. The Rawsonville soils are slightly deeper than the shallow Hogback soils. Rawsonville soils have bedrock within 40 inches of the surface, whereas Mundalite soils are very deep. Rawsonville soils lack redoximorphic features that are present in somewhat poorly drained Worden soils and the very poorly drained Sabattis soils.

Typical pedon of Rawsonville loam, in a Rawsonville-Hogback complex, 15 to 35 percent slopes, very rocky, in the Town of Dannemora, about 2.7 miles south of State Route 374 on Standish Road, and about 1,000 feet southeast of Standish Road in a wooded area; USGS Lyon Mountain topographic quadrangle, lat. 44 degrees 42 minutes 35 seconds N. and long. 73 degrees 56 minutes 32 seconds W., NAD 1927:

Oa—0 to 1 inches, black (5YR 2.5/1) highly decomposed leaves and roots.

A—1 to 3 inches, black (5YR 2.5/1) loam; weak medium and fine granular structure; very friable; many fine and very fine, common medium, and few coarse roots; 7 percent rock fragments; very strongly acid; clear wavy boundary.

E—3 to 4 inches, reddish gray (5YR 5/2) fine sandy loam; weak medium and coarse subangular blocky structure; very friable; many very fine and fine, and common medium roots; 5 percent rock fragments; very strongly acid; abrupt broken boundary.

Bh—4 to 7 inches, dark reddish brown (5YR 3/2) loam; weak medium subangular blocky structure; very friable; moderately smeary; many very fine and fine, and common medium roots; 5 percent rock fragments; very strongly acid; clear wavy boundary.

Bhs—7 to 10 inches, dark reddish brown (5YR 3/3) loam; weak medium and coarse subangular blocky structure; friable; moderately smeary; many very fine and fine roots; 7 percent rock fragments; very strongly acid; gradual wavy boundary.

Bs1—10 to 20 inches, reddish brown (5YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; slightly smeary; many very fine, common fine, and few medium roots; 13 percent rock fragments; very strongly acid; clear wavy boundary.

Bs2—20 to 22 inches, brown (7.5YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; common very fine roots; 13 percent rock fragments; very strongly acid; abrupt smooth boundary.

BC—22 to 26 inches, dark yellowish brown (10YR 4/4) fine sandy loam; weak medium platy structure; firm; few medium distinct brown (10YR 5/3) areas of iron depletion on faces of peds; 10 percent rock fragments; strongly acid; abrupt smooth boundary.

R—26 inches, massive granitic bedrock.

The thickness of the solum and depth to bedrock range from 20 to 40 inches. The thickness of the spodic horizon typically is more than 16 inches. Rock fragments range from 0 to 20 percent in the upper part of the solum and 5 to 35 percent in the lower part of the solum.

The A horizon, if present, has hue of 5YR to 10YR, value of 2 or 3, and chroma of 0 to 2. It is fine sandy loam or loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The E horizon has hue of 5YR to 10YR, value 3 to 6, and chroma of 1 to 3. It is sandy loam, fine sandy loam, or loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The Bh horizon has hue of 2.5YR to 7.5YR, value of 2 or 3, and chroma of 0 to 2. It is sandy loam, fine sandy loam, or loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The Bhs horizon has hue of 5YR or 7.5YR, value of 3 and chroma of 3. It is sandy loam, fine sandy loam, or loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The Bs horizon has hue of 5YR or 7/5YR, value 4 to 6, and chroma of 4 to 6. It is sandy loam, fine sandy loam, or loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The BC horizon has hue of 7.5YR to 5Y, value of 3 to 5, and chroma of 2 to 4. It is sandy loam or fine sandy loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The C horizon, if present, has hue of 2.5Y or 5Y, value of 3 to 5, and chroma of 2 to 4. It is sandy loam or fine sandy loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

Rhinebeck Series

The Rhinebeck series consists of very deep, somewhat poorly drained soils on glacial lake plains. These soils formed in clayey lacustrine sediments. Slopes range from 0 to 5 percent.

The Rhinebeck soils are on landscapes near the Kingsbury, Adjidaumo, Roundabout, Massena, Gardenisle and Benson soils. The Rhinebeck soils have less clay (35 to 60 percent) in the particle size control section than the Kingsbury soils. Rhinebeck soils have more redoximorphic features including masses of iron oxides in the subsoil relative to the gleyed matrix of Adjidaumo soils. Rhinebeck soils have more clay, and less silt or very fine sand than the Roundabout soils. Rhinebeck soils have few or no rock fragments in its profile relative to loamy Massena soils. Also, Rhinebeck soils are very deep to bedrock compared to moderately deep Gardenisle soils and shallow Benson soils.

Typical pedon of Rhinebeck silty clay loam, in a Kingsbury-Rhinebeck complex, in the Town of Peru, 0.2 mile west of intersection of Laphams Mill Road with US Route 9, and 100 feet north of Laphams Mill Road in field with brush; USGS Keeseville topographic quadrangle, lat. 44 degrees 36 minutes 17 seconds N. and long. 73 degrees 26 minutes 41 seconds W., NAD 1927:

Ap—0 to 8 inches, very dark grayish brown (10YR 3/2) silty clay loam; light brownish gray (10YR 6/2) dry; moderate medium subangular blocky structure; friable; common medium, and many fine and very fine roots; few medium, and common fine and very fine pores; neutral; abrupt smooth boundary.

Bt1—8 to 17 inches, dark grayish brown (10YR 4/2) silty clay; strong medium subangular blocky structure; firm; few medium, and common fine and very fine roots; many fine and very fine pores; few faint, discontinuous clay flows in macropores; common fine distinct yellowish brown (10YR 5/4), and few fine prominent brown (7.5YR 5/6) masses of iron oxides; neutral; clear smooth boundary.

Bt2—17 to 25 inches, brown (10YR 4/3) silty clay; strong medium angular blocky structure; firm; few fine, and common very fine roots; common fine and very fine pores; common faint, discontinuous clay skins on faces of peds, and in macropores; common fine distinct light brownish gray (10YR 6/2) areas of iron depletion, and common fine distinct brown (7.5YR 4/4) masses of iron oxides; neutral; gradual smooth boundary.

Btg—25 to 31 inches, dark grayish brown (10YR 4/2) silty clay; strong medium subangular blocky structure; firm; few very fine roots; common fine and very fine pores; common faint, discontinuous clay skins on faces of peds, and in macropores; many medium distinct light brownish gray (10YR 6/2) areas of iron depletion, and many medium distinct brown (7.5YR 4/4) masses of iron oxides; neutral; clear smooth boundary.

Cg—31 to 51 inches, dark grayish brown (2.5Y 4/2) silty clay loam; massive; firm; common fine and very fine pores; few fine distinct dark yellowish brown (10YR

4/4) masses of iron oxides, and few fine distinct light brownish gray (10YR 6/2) areas of iron depletion; neutral; clear smooth boundary.

2Cg—51 to 72 inches, dark grayish brown (2.5Y 4/2) varved silty clay loam, silt loam and very fine sandy loam; massive within varves; friable; common fine and very fine pores; common fine distinct dark yellowish brown (10YR 4/4) and brown (7.5YR 4/4) masses of iron oxides; slightly alkaline.

The thickness of the solum ranges from 20 to 40 inches. Depth to carbonates ranges from 20 to 72 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is more than 60 inches. Rock fragments range from 0 to 10 percent by volume throughout.

The Ap horizon has hue of 7.5YR to 2.5Y, value of 2 to 4, and chroma of 1 to 3. It is silt loam or silty clay loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The E horizon, if present, has hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 1 to 3. It is silt loam, very fine sandy loam, or silty clay loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The Bt horizon has hue of 7.5YR to 5Y, value of 3 to 5, and chroma of 2 to 4. It is silty clay loam or silty clay in the fine earth fraction, with subhorizons of silt loam or clay in some pedons. Reaction ranges from strongly acid to slightly alkaline.

The C horizon has hue of 7.5YR to 5Y or it is neutral, value of 3 to 5, and chroma of 0 to 4. It is silty clay loam or silty clay in the fine earth fraction. Reaction ranges from slightly acid to moderately alkaline.

The 2C horizon has hue of 7.5YR to 5Y, value of 3 to 5, and chroma of 0 to 4. It is typically varved silty clay, silty clay loam, or silt loam with subhorizons, usually discontinuous, ranging to fine sand in the fine earth fraction. Reaction ranges from slightly acid to moderately alkaline.

Ricker Series

Ricker series consists of very shallow to moderately deep, excessively drained to well drained soils on glacial till uplands. These soils formed in organic material derived mostly from sphagnum moss. This organic material often overlies a thin mineral layer directly over bedrock. Slopes range from 3 to 80 percent.

Ricker soils are on landscapes nearby Schroon, Peasleeville, Lyman, Hogback, Irona and Topknot soils. The Ricker soils are bedrock controlled, organic soils whereas Schroon and Peasleeville soils are very deep, loamy glacial till. Ricker soils lack thick mineral soil over bedrock which is characteristic of Lyman, Hogback, Irona and Topknot soils.

Typical pedon of Ricker peat, in a map unit of Ricker-Skylight-Rockoutcrop complex, 35 to 70 percent slopes, very bouldery, in the Town of Saranac, about 20 feet east of the main trail to the state lookout tower on Lyon Mountain at the 3,650 feet contour in woodland; USGS Moffitsville topographic quadrangle, lat. 44 degrees 42 minutes 25 seconds N. and long. 73 degrees 51 minutes 45 seconds W., NAD 1927:

Oi—0 to 3 inches, black (N 2/0) slightly decomposed sphagnum moss, twigs and needles; 90 percent unrubbed fiber, 80 percent rubbed fiber; loose; extremely acid; clear smooth boundary.

Oe—3 to 5 inches, black (10YR 2/1) hemic material; 55 percent unrubbed fiber, 20 percent rubbed fiber; extremely acid; clear smooth boundary.

Oa—5 to 6 inches, black (N 2/0) sapric material; 15 percent unrubbed fiber, no fibers after rubbing; extremely acid; clear smooth boundary.

E—6 to 7 inches, dark grayish brown (10YR 4/2) loam; massive; friable; common very fine and fine, and few medium roots; 5 percent rock fragments; extremely acid; abrupt smooth boundary.

2R—7 inches, gneiss bedrock.

Depth to bedrock ranges from 2 to 26 inches. Rock fragments in the very thin mineral layer range from 0 to 50 percent by volume.

The Oi horizon has hue of 2.5YR to 10YR (or it is neutral), value of 2 to 4 and chroma of 1 to 4. It is undecomposed or slightly decomposed moss, leaves, needles, and twigs. Reaction is extremely acid.

The Oe horizon has hue of 2.5YR to 10YR (or it is neutral), value of 2 or 3 and chroma of 0 to 6. It is moderately decomposed organic material. Reaction is extremely acid.

The Oa horizon has hue of 2.5YR to 10YR (or it is neutral), value of 2 to 5 and chroma of 0 to 2. It is highly decomposed organic material. Reaction is extremely acid.

The E horizon has hue of 5YR to 2.5Y, value of 2 to 7 and chroma of 1 to 3. Texture ranges from coarse sand to loam in the fine earth fraction. Reaction is extremely acid or very strongly acid.

Roundabout Series

The Roundabout series consists of very deep, somewhat poorly drained soils on glacial lake plains. These soils formed in silt or very fine sand deposits in freshwater and marine environments. Slopes range from 0 to 3 percent.

Roundabout soils are in a drainage sequence with moderately well drained Nicholville soils. Roundabout soils are commonly adjacent to Swanton, Muskellunge, Hailesboro and Adjidaumo soils on the landscape. The Roundabout soils do not have the contrasting textures of loamy over clayey as in Swanton soils. Roundabout soils average less than 18 percent clay in the control section, whereas Muskellunge soils have more than 35 percent clay, and Hailesboro soils have between 18 and 35 percent clay. The Roundabout soils have less clay and a lighter-color surface than Adjidaumo soils.

Typical pedon of Roundabout silt loam, in the Town of Chazy, 0.5 mile north of the intersection of Lake Shore Road with Dunn Road, and about 410 feet west of Lake Shore Road in a cornfield; USGS Beekmantown topographic quadrangle, lat. 44 degrees 50 minutes 23 seconds N. and long. 73 degrees 24 minutes 41 seconds W., NAD 1927:

Ap—0 to 9 inches, very dark grayish brown (10YR 3/2) silt loam; moderate medium subangular blocky structure parting to moderate medium and fine granular; friable; common medium, fine and very fine roots; common fine and very fine pores; neutral; abrupt smooth boundary.

Bw—9 to 18 inches, light olive brown (2.5Y 5/3) very fine sandy loam; moderate coarse and medium subangular blocky structure; friable; common fine and very fine roots; common fine and very fine pores; many fine distinct yellowish brown (10YR 5/6) soft masses of iron oxides; neutral; clear smooth boundary.

Bg1—18 to 23 inches, grayish brown (2.5Y 5/2) silt loam; moderate medium subangular blocky structure; friable; few very fine roots; common fine and very fine pores; common fine distinct yellowish brown (10YR 5/6) and few fine distinct dark yellowish brown (10YR 4/4) soft masses of iron oxides; neutral; clear smooth boundary.

Bg2—23 to 31 inches, gray (5Y 5/1) very fine sandy loam; moderate medium subangular blocky structure; friable; few very fine roots; common fine and very fine pores; common medium prominent yellowish brown (10YR 5/6) and few fine prominent dark yellowish brown (10YR 4/4) soft masses of iron oxides; neutral; clear smooth boundary.

Cg1—31 to 37 inches, gray (5Y 5/1) silt loam; weak medium platy structure; friable; few fine and very fine pores; common fine prominent yellowish brown (10YR 5/6) and few fine prominent dark yellowish brown (10YR 4/4) soft masses of iron oxides; neutral; abrupt smooth boundary.

Cg2—37 to 45 inches, dark gray (5Y 4/1) silty clay loam; moderate thick and medium platy structure; firm; few fine and very fine pores; few fine prominent dark yellowish brown (10YR 4/6) and few fine prominent dark yellowish brown (10YR 4/4) soft masses of iron oxides; neutral; gradual smooth boundary.
Cg3—45 to 72 inches, dark gray (5Y 4/1) silt loam; massive; firm; neutral.

The thickness of the solum ranges from 16 to 35 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is more than 60 inches. Rock fragments are generally absent, but range up to 4 percent by volume within a depth of 40 inches.

The A horizon has hue of 10YR, value of 3 or 4, and chroma of 2 to 4. It is silt loam or very fine sandy loam in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The B horizon has hue of 10YR to 5Y, value of 3 to 6, and chroma of 1 to 4. It is silt loam or very fine sandy loam in the fine earth fraction. Reaction is very strongly acid to slightly acid.

The C horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 to 4. It is silt loam or very fine sandy loam in the fine earth fraction, and also has thin strata of silty clay loam. Reaction is moderately acid to neutral to a 40 inch depth, and ranges from moderately acid to moderately alkaline below 40 inches.

Rumney Series

The Rumney series consist of very deep, poorly drained soils on flood plains along large streams. These soils formed in loamy alluvial deposits. Slope ranges from 0 to 3 percent.

Rumney soils are commonly associated with Colton, Beseman, Loxley and Wonsqueak soils in Clinton County. Rumney soils are not as gravelly as the excessively drained Colton soils. Rumney soils lack the thick organic deposits characteristic of Beseman, Loxley and Wonsqueak soils.

Typical pedon of Rumney silt loam, in a unit of Ondawa-Rumney complex, in the Town of Wells, Hamilton County, is about 600 feet south of the old N.Y.S. Route 30 bridge just north of Auger Flats, and about 400 feet east of N.Y.S. Route 30; USGS Lake Pleasant topographic quadrangle, lat. 43 degrees 29 minutes 8 seconds N. and long. 74 degrees 16 minutes 6 seconds W., NAD 1927:

A—0 to 8 inches; very dark brown (10YR 2/2) silt loam; light brownish gray (10YR 6/2) dry; strong very fine and fine granular structure; very friable; many fine and few medium roots; moderately acid; abrupt smooth boundary.
AB—8 to 12 inches; dark brown (10YR 3/3) silt loam; strong fine and medium subangular blocky structure; very friable; many fine and common medium roots; few medium faint dark grayish browm (10YR 4/2) areas of iron depletion; moderately acid; abrupt smooth boundary.
Bg1—12 to 16 inches; dark grayish brown (10YR 4/2) very fine sandy loam; moderate medium subangular blocky structure; very friable; few fine roots; many fine and few medium pores; many medium faint brown (10YR 4/3) to dark yellowish brown (10YR 4/4) and many fine and medium distinct dark brown (7.5YR 4/3) soft masses of iron oxides; moderately acid; clear smooth boundary.
Bg2—16 to 34 inches; brown (10YR 5/3) loam; weak medium and moderate coarse subangular blocky structure; friable; few fine roots; many fine and medium, and few coarse pores; common fine faint grayish brown (10YR 5/2) and many medium distinct dark brown (7.5YR 4/3) areas of iron depletion; moderately acid; abrupt smooth boundary.
Cg—34 to 39 inches; light olive brown (2.5Y 5/3) loam; very friable; few fine distinct olive brown (2.5Y 4/4) soft masses of iron oxides; massive; moderately acid; abrupt smooth boundary.

2Cg—39 to 72 inches; dark gray (10YR 4/1) loamy sand; single grain; loose, moderately acid.

The thickness of the solum and depth to the coarse-textured substratum range from 20 to 40 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Gravel content ranges from 0 to 15 percent by volume in the solum and from 0 to 40 percent in the substratum.

The A horizon or Ap, where present, has hue of 10YR or 2.5Y, value of 2 to 4, and chroma of 1 or 2. They are sandy loam, fine sandy loam, very fine sandy loam, loam, or silt loam in the fine earth fraction. Reaction ranges from very strongly acid to neutral.

The AB horizon has hue of 10YR or 2.5Y, value and chroma of 3 or 4. They are sandy loam, fine sandy loam, very fine sandy loam, loam, or silt loam in the fine earth fraction. Reaction ranges from very strongly acid to neutral.

The B horizon has hue of 10YR to 5Y, value of 3 to 6, and chroma of 1 to 4. At least one subhorizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 within 20 inches of the surface. It is sandy loam, fine sandy loam, very fine sandy loam or loam in the fine earth fraction. Reaction ranges from very strongly acid to neutral.

The C horizon has hue of 10YR to 5Y, value of 3 to 6, and chroma of 1 to 4. Texture of individual layers range from loamy fine sand to coarse sand in the fine-earth fraction. Included in some pedons are thin loamy and/or extremely gravelly strata. Also, some pedons have a loamy subhorizon just below the Bg horizon. Reaction ranges from very strongly acid to neutral.

Runeberg Series

The Runeberg series consists of very deep, very poorly drained soils on glacial ground moraine and toeslopes of drumlins. These soils formed in loamy deposits. Slopes range from 0 to 2 percent.

The Runeberg soils are in a drainage sequence with the well drained Grenville soils, moderately well drained Hogansburg soils, and the somewhat poorly drained Malone soils. Runeberg soils are also near the Kalurah, Peasleeville, Chazy, Ogdensburg and Cook soils on the landscape. The Runeberg soils have a grayer matrix and are less acid than the Kalurah and Peasleeville soils. Runeberg soils are very deep to bedrock whereas Chazy and Ogdensburg soils are moderately deep. Runeberg soils lack the sandy surface and subsoil layers characteristic of Cook soils (fig. 24).

Typical pedon of Runeberg mucky loam, in the Town of Beekmantown, about 1,100 feet north of intersection with Jersey Swamp Road and 1,200 feet east of Durand Road on west side of Transmission Line; USGS Beekmantown topographic quadrangle, 44 degrees 45 minutes 31 seconds north Latitude and 73 degrees 29 minutes 16 seconds west Longitude, NAD 1927:

A—0 to 9 inches, black (10YR 2/1) mucky loam; dark gray (10YR 4/1) dry; weak medium subangular blocky structure parting to weak fine granular; very friable; many very fine, fine and medium roots; 10 percent rock fragments (including 5 percent cobbles); neutral; clear smooth boundary.

Bw—9 to 17 inches, brown (10YR 4/3) cobbly loam; weak coarse and medium subangular blocky structure; very friable; many very fine, and common fine roots; common fine and very fine, and few medium pores; grayish brown (10YR 5/2) on faces of peds; common medium and coarse distinct light gray (10YR 6/1) areas of iron depletion, and many medium and fine distinct dark yellowish brown (10YR 4/6) soft masses of iron oxides; 15 percent rock fragments (including 5 percent gravel); slightly alkaline; abrupt wavy boundary.

BCg—17 to 22 inches, dark grayish brown (10YR 4/2) sandy loam; moderate thick and medium platy structure; friable; few very fine and fine pores; dark gray (10YR 4/1)

Figure 24.—A profile of Runeberg mucky loam with a thick black mineral surface above a mottled subsoil (having redoximorphic features) in a glacial till landform (red marks on tape equal one foot intervals).

on faces of peds; common medium and coarse distinct yellowish brown (10YR 5/6) soft masses of iron oxides, and few coarse distinct light gray (10YR 6/1) areas of iron depletion; 13 percent gravel; slightly alkaline, slightly effervescent; clear smooth boundary.

Cg1—22 to 42 inches, grayish brown (10YR 5/2) fine sandy loam; massive with weak thick and medium plate-like divsions and few very coarse separation cracks (gray (10YR 5/1) on faces); friable; few very fine pores; many fine and medium distinct yellowish brown (10YR 5/6) soft masses of iron oxides; 13 percent gravel; moderately alkaline, strongly effervescent; gradual smooth boundary.

Cg2—42 to 72 inches, grayish brown (10YR 5/2) gravelly fine sandy loam; massive; friable; few very fine pores; few fine distinct yellowish brown (10YR 5/6) soft masses of iron oxides, and few medium faint gray (10YR 5/1) areas of iron depletion; 20 percent rock fragments (including 10 percent cobbles); moderately alkaline, strongly effervescent.

The thickness of solum ranges from 22 to 36 inches. Depth to carbonates ranges from 17 to 36 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Coarse fragments range from 3 to 15 percent by volume in the solum and from 3 to 20 percent in the substratum.

Some pedons have an O horizon less than 4 inches thick.

The A horizon has hue of 10YR to 5Y (or it is neutral), value 2 or 3, and chroma of 1. It is sandy loam, fine sandy loam, or loam in the fine earth fraction. Reaction is slightly acid or neutral.

The B horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 1 to 3. It is sandy loam, fine sandy loam or loam in the fine earth fraction. Reaction is slightly acid to slightly alkaline.

The BC horizon has hue of 10YR to 5Y, value of 4 to 6 and chroma of 1 to 3. It is sandy loam, fine sandy loam or loam in the fine earth fraction. Reaction is slightly acid to slightly alkaline.

The C horizon has hue of 10YR to 5Y, value of 5 or 6, and chroma of 1 to 3. It is sandy loam, fine sandy loam or loam in the fine earth fraction. Reaction is slightly alkaline or moderately alkaline.

Sabattis Series

The Sabattis series consists of very deep, very poorly drained soils in low areas of upland glacial till plains. These soils formed in loamy deposits. Slopes range from 0 to 3 percent.

The Sabattis soils are near the Monadnock, Sunapee, Peasleeville, Adirondack, Tunbridge and Wonsqueak soils on the landscape. The Sabattis soils have a grayer matrix than the well drained Monadnock, moderately well drained Sunapee and somewhat poorly drained Peasleeville soils. Sabattis soils lack the dense substrata associated with Adirondack soils. Sabattis soils are deeper to bedrock than the moderately deep Tunbridge soils. The Sabattis soils have a thinner organic mantle than Wonqueak soils.

Typical pedon of Sabattis mucky fine sandy loam, very bouldery, in the Town of Ausable, about 0.5 mile north of intersection with Arnold Hill Road and 50 feet west of Hibernia Road in a woodlot; USGS Ausable Forks topographic quadrangle, lat. 44 degrees 29 minutes 42 seconds N. and long. 73 degrees 37 minutes 12 seconds W., NAD 1927:

Oa—0 to 8 inches, black (10YR 2/1) sapric material; moderate medium and fine granular structure; very friable; many fine and very fine, and common medium roots; moderately acid; clear smooth boundary.

A—8 to 11 inches, mixed very dark grayish brown (10YR 3/2) (55 percent) and very dark brown (10YR 2/2) mucky fine sandy loam; weak fine and medium subangular blocky structure; very friable; many fine and very fine, common medium, and few coarse roots; 14 percent rock fragments (including 7 percent gravel); slightly acid; clear smooth boundary.

Bg1—11 to 19 inches, grayish brown (10YR 5/2) cobby sandy loam; weak medium and fine subangular blocky structure; friable; few fine and common very fine roots; many fine distinct yellowish brown (10YR 5/6) and common coarse and medium distinct brown (7.5YR 4/4) soft masses of iron oxides; 20 percent rock fragments (including 10 percent gravel); neutral; clear smooth boundary.

Bg2—19 to 26 inches, grayish brown (10YR 5/2) gravelly fine sandy loam; very weak coarse and medium subangular blocky structure; friable; many coarse and medium distinct yellowish brown (10YR 5/6) and few fine distinct dark yellowish brown (10YR 4/6) soft masses of iron oxides; 15 percent rock fragments (including 5 percent cobbles); neutral; clear smooth boundary.

Cg1—26 to 39 inches, light brownish gray (10YR 6/2) gravelly fine sandy loam; massive; friable; common coarse and medium distinct yellowish brown (10YR 5/6) soft masses of iron oxides and few coarse faint pinkish gray (7.5YR 6/2) areas of iron depletion; 20 percent rock fragments (including 10 percent cobbles); neutral; clear smooth boundary.

Cg2—39 to 72 inches, brown (10YR 5/3) fine sandy loam; massive; friable; few coarse and medium distinct yellowish brown (10YR 5/6) soft masses of iron oxides and few coarse distinct pinkish gray (7.5YR 6/2) areas of iron depletion; 10 percent rock fragments; neutral.

The thickness of the solum ranges from 10 to 38 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments range from 2 to 35 percent by volume in the mineral subsurface and subsoil, and from 5 to 45 percent in the substratum.

The O horizon has hue of 5YR to 10YR (or it is neutral), value of 2 or 3 and chroma of 0 to 2. It is dominantly sapric or hemic material, but includes fibric subhorizons. Reaction ranges from very strongly acid to slightly acid.

The A horizon has hue of 5YR to 2.5Y (or it is neutral), value of 2 to 4, and chroma of 0 to 3. It is sandy loam, fine sandy loam, very fine sandy loam, loam or silt loam in the fine earth fraction with mucky, gravelly or cobbly analogues. Reaction ranges from very strongly acid to slightly acid.

The B horizon has hue of 7.5YR to 5Y (or it is neutral), value of 4 to 6 and chroma of 0 to 3. It is sandy loam, fine sandy loam, very fine sandy loam, loam or silt loam in the fine earth fraction. Reaction ranges from very strongly acid to neutral.

The C horizon has hue of 7.5YR to 5Y, value of 3 to 6 and chroma of 1 to 6. Texture ranges from sandy loam to loam in the fine earth fraction. Where fluvial sorting has influienced the substratum, thin layers or lenses of loamy sand, loamy fine sand, very fine sand or silt are common. Reaction ranges from strongly acid to slightly alkaline.

Saprists

Saprists consist of very deep, very poorly drained soils formed in well decomposed plant matter on lake plains and in glacial till uplands. These soils are ponded with shallow water throughout most of the year. They are on low-lying landscape positions and on depressions adjacent to bodies of water. Some areas of this unit were created by beaver dams blocking drainageways. Slopes are less than one percent.

Saprists in Clinton County are mapped in association with Aquents which are formed in mineral soil deposits. Saprists commonly are near Bucksport, Adjidaumo, Runeberg, Lyonmounten and Sabattis soils on the landscape. Saprists and Aquents are ponded with water most of the year compared to these associated soils which are either ponded for less time or not ponded at all.

Saprists are highly variable; therefore, a typical pedon is not provided. Saprists consist of organic material more than 16 inches thick over mineral soil deposits or bedrock. Bedrock is generally at a depth of more than 72 inches. Rock fragments are generally absent in the organic part, and range from 0 to 45 percent in the underlying mineral portion.

The organic soil layers have hue of 10YR to 5Y (or are neutral), value of 1 to 3, and chroma of 0 to 2. It is dominantly sapric material, but individual layers contain variable amounts of hemic and fibric material. Reaction ranges from very strongly acid to neutral.

The underlying mineral substratum has hue of 10YR to 5Y (or are neutral), value of 3 to 5, and chroma of 0 to 2. Texture ranges from sand to silty clay in the fine earth fraction. Reaction ranges from very strongly acid to neutral.

Schroon Series

The Schroon series consists of very deep, moderately well drained soils on uplands. These soils were formed in loamy glacial till deposits. Slopes range from 3 to 15 percent.

The Schroon soils occur in a drainage sequence with well drained Bice soils,

somewhat poorly drained Peasleeville soils, and poorly drained Lyonmounten soils. Schroon soils are also near the Sunapee, Chazy, Topknot, Irona, Conic and Sabattis soils on the landscape. The Schroon soils do not have a spodic horizon as in Sunapee soils. Schroon soils are very deep to bedrock whereas Chazy, Topknot, Irona and Conic soils are less than 40 inches deep. Schroon soils do not have a dark colored organic surface as is characteristic of Sabattis soils.

Typical pedon of Schroon fine sandy loam, 8 to 15 percent slopes, in the Town of Saranac, about 700 feet north of East Road at a point 1.5 miles west of the intersection of Downs Road and East Road in a hayfield; USGS Dannemora topographic quadrangle, lat. 44 degrees 38 minutes 34 seconds N. and long. 73 degrees 42 minutes 58 seconds W., NAD 1927:

Ap—0 to 8 inches; dark brown (10YR 3/3) fine sandy loam; pale brown (10YR 6/3) dry; weak fine granular structure; very friable; many fine and few medium roots; 5 percent rock fragments; strongly acid; abrupt smooth boundary.

Bw1—8 to 14 inches; strong brown (7.5YR 5/6) fine sandy loam; weak medium subangular blocky structure; very friable; few very fine roots; 5 percent rock fragments; moderately acid; gradual smooth boundary.

Bw2—14 to 23 inches; brown (10YR 5/3) gravelly fine sandy loam; weak coarse subangular blocky structure; very friable; few fine roots; few medium distinct strong brown (7.5YR 5/6) soft masses of iron oxides; 15 percent rock fragments; strongly acid; clear wavy boundary.

C1—23 to 44 inches; yellowish brown (10YR 5/4) gravelly fine sandy loam; massive with weak medium and thin plate-like divisions; friable; few fine roots; common coarse distinct light gray (10YR 7/2) areas of iron depletion, common medium distinct yellowish brown (10YR 5/8) and few coarse distinct strong brown (7.5YR 4/6) soft masses of iron oxides; 20 percent gravel, 5 percent cobbles; moderately acid; gradual wavy boundary.

C2—44 to 60 inches; pale brown (10YR 6/3) gravelly fine sandy loam; massive with weak medium and thin plate-like divisions; firm; many coarse, prominent dark brown (7.5YR 4/4) and strong brown (7.5YR 5/6) soft masses of iron oxides, and few coarse faint light gray (10YR 7/2) areas of iron depletion; 20 percent gravel, 5 percent cobbles; slightly acid; clear wavy boundary.

C3—60 to 72 inches; brown (10YR 5/3) gravelly fine sandy loam; massive; firm; common medium distinct strong brown (7.5YR 5/6) soft masses of iron oxides; 20 percent gravel; 5 percent cobbles; slightly acid.

The thickness of the solum ranges from 18 to 36 inches. Redoximorphic features occur within 24 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragment content ranges from 3 to 35 percent by volume throughout the soil including up to 15 percent rock fragments larger than 3 inches in diameter.

The Ap horizon has hue of 7.5YR or 10YR, value of 3 or 4 and chroma of 2 or 3. If the pedon is undisturbed, the A horizon has value of 2 or 3 and chroma of 1 or 2, with a dry value of 6. Texture is sandy loam, fine sandy loam or loam in the fine earth fraction. Reaction is very strongly acid to moderately acid.

The Bw horizon has hue of 5YR to 10YR, value of 3 to 5 and chroma of 3 to 6. Texture is sandy loam, fine sandy loam, or loam in the fine earth fraction. Reaction is very strongly acid to moderately acid.

The BC horizon, if present, has hue of 10YR or 2.5Y, value of 4 or 5 and chroma of 3 to 6. Texture is sandy loam, fine sandy loam, or loam in the fine earth fraction. Reaction is very strongly acid to moderately acid.

The C horizon has hue of 10YR to 5Y, value of 4 to 6 and chroma of 2 to 4. Texture is coarse sandy loam, sandy loam, or fine sandy loam in the fine earth fraction. Thin lenses of sand, loamy sand or silt loam may occur in some pedons. Reaction is strongly acid to slightly acid with slightly acid restricted to depths greater than 30 inches.

Sciota Series

The Sciota series consists of very deep, somewhat poorly drained soils on glacial lake plains and toeslopes of beach ridges. These soils formed in sandy sediments. Slopes range from 0 to 3 percent.

The Sciota soils are in a drainage sequence with moderately well drained Mooers soils and poorly drained Deinache soils. Sciota soils are also near the Wainola, Flackville, Pinconning, Trout River, Malone and Coveytown soils on the landscape. Sciota soils lack a spodic horizon which is characteristic of Wainola soils. The Sciota soils do not have clayey substrata within 40 inches of the surface as in the Flackville and Pinconning soils. Sciota soils are grayer and not as gravelly as Trout River soils. The Sciota soils have less silt and clay than the loamy Malone soils and the loamy substrata of Coveytown soils.

Typical pedon of Sciota fine sand, in the Town of Mooers, 0.75 mile southeast of junction of LaValley Road with Angelville Road, and 3,000 feet south of LaValley Road in a cornfield; USGS Mooers topographic quadrangle, lat. 44 degrees, 55 minutes, 41 seconds N., and long. 73 degrees, 31 minutes and 31 seconds W., NAD 1927:

Ap—0 to 9 inches, very dark grayish brown (10YR 3/2) fine sand, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure parting to weak fine granular; very friable; many very fine and fine, and few medium roots; moderately acid; abrupt smooth boundary.

Bw1—9 to 14 inches, pale brown (10YR 6/3) and light olive brown (2.5Y 5/3) fine sand; very weak coarse and medium subangular blocky structure; very friable; few very fine roots; common coarse and medium distinct yellowish brown (10YR 5/6) soft masses of iron oxides and few fine and medium distinct light gray (10YR 7/2) areas of iron depletion; neutral; clear smooth boundary.

Bw2—14 to 19 inches, pale brown (10YR 6/3) fine sand; very weak coarse and medium subangular blocky structure; very friable; common fine and medium distinct yellowish brown (10YR 5/6) soft masses of iron oxides and few fine faint light brownish gray (10YR 6/2) areas of iron depletion; slightly acid; clear smooth boundary.

Bw3—19 to 24 inches, mixed pale brown (10YR 6/3) and light yellowish brown (10YR 6/4) fine sand; weak coarse and medium subangular blocky structure; very friable; many coarse and medium distinct yellowish brown (10YR 5/6) and many fine and medium prominent strong brown (7.5YR 5/6) soft masses of iron oxides, and common fine faint light brownish gray (10YR 6/2) areas of iron depletion; slightly acid; clear smooth boundary.

BC—24 to 37 inches, mixed light brownish gray (10YR 6/2) and pale brown (10YR 6/3) fine sand; weak thin and medium platy structure; loose; common medium distinct yellowish brown (10YR 5/6) and common fine distinct brownish yellow (10YR 6/6) soft masses of iron oxides; slightly alkaline; abrupt smooth boundary.

Cg1—37 to 50 inches, dark grayish brown (2.5Y 4/2) loamy fine sand; single grain; very friable; common medium and coarse prominent yellowish brown and dark yellowish brown (10YR 5/4 and 4/4) soft masses of iron oxides; slightly alkaline; clear smooth boundary.

Cg2—50 to 57 inches, dark gray (N 4/0) fine sand; single grain; very friable; few fine and medium distinct very dark gray (N 3/0) organic stains; slightly alkaline; clear smooth boundary.

Cg3—57 to 72 inches, dark gray (N 4/0) sand; single grain; very friable; slightly alkaline.

The thickness of the solum ranges from 18 to 39 inches. Depth to carbonates ranges from 20 to 80 inches. Redoximorphic features occur within 40 inches of the mineral soil surface. Rock fragments are typically absent, but may range up to 2 percent by volume in the lower subsoil and substratum.

The Ap horizon has hue of 10YR, value of 2 or 3, and chroma of 1 or 2. Texture is fine sand, loamy fine sand or fine sandy loam in the fine earth fraction. Unless limed, reaction ranges from moderately acid to neutral.

The Bw horizon has hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 1 to 4. It has faint to prominent redox concentrations and depletions. Texture is fine sand or loamy fine sand in the fine earth fraction. Reaction ranges from slightly acid to slightly alkaline.

The BC horizon has hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 1 to 4. It has faint to prominent redox concentrations and depletions. Texture is fine sand or loamy fine sand in the fine earth fraction. Reaction ranges from slightly acid to slightly alkaline.

The Cg horizon has hue of 10YR or 2.5Y (or it is neutral), value of 3 to 6, and chroma of 0 to 2. It has faint to prominent redox concentrations and depletions. Texture is fine sand, sand or loamy fine sand in the fine earth fraction. Reaction ranges from neutral to moderately alkaline

Searsport Series

The Searsport series consists of very deep, very poorly drained soils on outwash plains and terraces. These soils formed in basin-like areas on sandy plains. Slopes range from 0 to 2 percent.

Searsport soils are near the Rumney, Adams, Naumburg, Beseman and Loxley soils. The Searsport soils have a decrease in organic matter with depth whereas Rumney soils have an irregular decrease in organic matter. Searsport soils do not have a reddish brown spodic horizon as in Adams and Naumburg soils. Searsport soils have thinner organic mantles than are characteristic of Beseman and Loxley soils.

Typical pedon of Searsport muck, in a map unit of Searsport-Borosaprists-Naumburg complex, in the Town of Black Brook, about 1.2 mile west of Old Silver Lake Road and 750 feet north of Forestdale Road; USGS Lake Placid topographic quadrangle, lat. 44 degrees 28 minutes 20 seconds N. and long. 73 degrees 49 minutes 10 seconds W., NAD 1927:

Oa—0 to 8 inches, very dark brown (10YR 2/2) muck; dark grayish brown (10YR 4/2) dry; weak very fine and fine granular structure; very friable; many fine and common medium roots; moderately acid; abrupt smooth boundary.

Cg1—8 to 18 inches, dark grayish brown (10YR 4/2) loamy sand; single grain; very friable; common fine and few medium roots; common medium, fine and very fine pores; slightly acid; gradual smooth boundary.

Cg2—18 to 23 inches, dark grayish brown (10YR 4/2) loamy fine sand; single grain; very friable; few fine and medium roots; few medium, and common fine and very fine pores; moderately acid; gradual smooth boundary.

Cg3—23 to 34 inches, dark grayish brown (10YR 4/2) loamy sand; single grain; very friable; few fine and medium roots; common medium, fine and very fine pores; slightly acid; abrupt smooth boundary.

Cg4—34 to 50 inches, dark gray (10YR 4/1) loamy sand; single grain; loose; few fine and medium roots in upper part; common medium, fine and very fine pores; slightly acid; gradual smooth boundary.

Cg5—50 to 72 inches, gray (10YR 5/1) coarse sand; single grain; loose; common medium, fine and very fine pores; 2 percent rock fragments; slightly acid.

Redoximorphic features occur within 20 inches of the mineral soil surface. Rock fragments range from 0 to 15 percent by volume in the particle size control section, and from 0 to 45 percent below.

The Oa or Oe horizon has hue of 5YR to 5Y (or it is neutral), value of 2 or 3 and chroma of 0 to 2. Reaction ranges from very strongly acid to slightly acid.

Some pedons have a Eg horizon. The Eg horizon has hue of 10YR to 5Y (or it is neutral), value of 4 to 7, and chroma of 0 or 1. Texture is fine sandy loam to sand in the fine earth fraction. Reaction is very strongly acid to slightly acid.

The Cg horizon has hue of 10YR to 5Y (or it is neutral), value of 4 to 6, and chroma of 0 to 4. Texture is loamy fine sand, loamy sand, fine sand, sand or coarse sand in the fine earth fraction. Some pedons are stratified. Reaction is very strongly acid to slightly acid.

Shaker Series

The Shaker series consists of very deep, somewhat poorly drained soils on lake plains and in depressions on uplands. These soils formed in a mantle of loamy material over clayey lacustrine sediments. Slopes range from 0 to 3 percent.

Shaker soils are commonly on landscapes adjacent to Flackville, Pinconning, Hailesboro, Rhinebeck, Adjidaumo and Mino soils. Shaker soils have a less sand in the subsoil than the Flackville and Pinconning soils. The Shaker soils differ from the Hailesboro, Rhinebeck and Adjidaumo soils in having more sand in the subsoil. Shaker soils differ from the somewhat poorly drained Mino soils in having more clayey sediments within 40 inches deep.

Typical pedon of Shaker loam, in the Town of Plattsburgh, on Plattsburgh Air Force Base about 1700 feet north of intersection of U.S. Route 9 and the D & H Railroad and about 800 feet west in a woodland on the south edge of an open field; USGS Plattsburgh topographic quadrangle, lat. 44 degrees 39 minutes 58 seconds N. and long. 73 degrees 26 minutes 54 seconds W., NAD 1927:

Ap—0 to 9 inches, dark brown (10YR 3/3) loam; weak fine granular structure; very friable; common coarse, and many medium, fine and very fine roots; common fine pores; slightly acid; abrupt smooth boundary.

Bw—9 to 15 inches, brown (10YR 5/3) very fine sandy loam; weak medium subangular blocky structure; very friable; few coarse, common medium, and many fine and very fine roots; common fine pores; few fine distinct light brownish gray (10YR 6/2) areas of iron depletion, and common fine distinct dark yellowish brown (10YR 4/4) and few fine distinct yellowish brown (10YR 5/6) soft masses of iron oxides; slightly acid; clear smooth boundary.

Bg—15 to 25 inches, light brownish gray (10YR 6/2) very fine sandy loam; weak thick and very thick platy structure parting to weak fine and medium angular blocky; friable; few medium, and common fine and very fine roots; few fine and medium pores; common fine distinct yellowish brown (10YR 5/6), few fine distinct dark yellowish (10YR 4/6) and common medium faint brown (10YR 5/3) soft masses of iron oxides; slightly acid; abrupt smooth boundary.

2C1—25 to 46 inches, dark gray (10YR 4/1) clay; strong medium and coarse angular blocky structure; very firm; few fine and very fine roots; few fine pores; common medium distinct yellowish brown (10YR 5/6) and dark yellowish brown (10YR 4/6) soft masses of iron oxides; neutral; gradual smooth boundary.

2C2—46 to 72 inches, dark gray (10YR 4/1) clay; massive; very firm; few fine pores; many medium and coarse distinct brown (10YR 4/3) and common fine distinct dark yellowish brown (10YR 4/6) soft masses of iron oxides; neutral.

The thickness of the solum and depth to underlying clayey material range from 18 to 40 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Rock fragments range from 0 to 5 percent in the solum and from 0 to 3 percent in the underlying clayey horizons.

The A horizon has hue of 7.5YR to 2.5Y, value of 2 to 4, and chroma of 1 to 3. Texture is sandy loam, fine sandy loam, very fine sandy loam or loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The Bw horizon has hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 2 to 4. Texture is very fine sandy loam, fine sandy loam, sandy loam or loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The Bg horizon has hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 1 or 2. Texture is very fine sandy loam, fine sandy loam, sandy loam or loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

Some pedons have a 2B horizon with texture of silty clay loam, silty clay or clay.

The 2C horizon has hue of 7.5YR to 5Y (or it is neutral), value of 3 to 6, and chroma of 0 to 4. Texture is silty clay loam, silty clay or clay in the fine earth fraction. Reaction ranges from moderately acid to slightly alkaline.

Sheddenbrook Series

The Sheddenbrook series are moderately deep, moderately well drained soils on outwash plains and near-shore deposits overlying sandstone bedrock. These soils formed in bedrock controlled outwash sands. Slopes range from 0 to 8 percent.

The Sheddenbrook soils are near the Adams, Croghan, Irona, Topknot, Trout River and Fahey soils on the landscape. Sheddenbrook soils are only 20 to 40 inches deep to bedrock whereas Adams and Croghan soils are very deep. The Sheddenbrook soils have more sand and less clay than the Irona and Topknot soils. Sheddenbrook soils have less gravel and cobbles than the very deep Trout River and Fahey soils.

Typical pedon of Sheddenbrook gravelly loamy fine sand, 3 to 8 percent slopes, in the Town of Mooers, about 1,500 feet east of the intersection of Gilbert Road and Emery Road, in a roadcut on the southeast side of Gilbert Road; USGS Altona topographic quadrangle, lat. 44 degrees 55 minutes 48 seconds N. and long. 73 degrees 37 minutes 30 seconds W., NAD 1927:

Oi—0 to 1 inches, slightly decomposed roots and leaves.

Ap—1 to 7 inches, very dark brown (10YR 2/2) gravelly loamy fine sand; light brownish gray (10YR 6/2) dry; weak fine granular structure; very friable; many fine and common medium roots; 20 percent rock fragments; moderately acid; abrupt smooth boundary.

Bs1—7 to 17 inches, reddish brown (5YR 4/4) gravelly loamy sand; weak fine and medium granular structure; very friable; many fine and few medium roots; 30 percent rock fragments; strongly acid; clear wavy boundary.

Bs2—17 to 27 inches, brown (7.5YR 4/3) gravelly loamy sand; weak fine subangular blocky structure parting to weak fine granular; very friable; few fine and medium roots; 30 percent rock fragments; strongly acid; clear wavy boundary.

C—27 to 30 inches; brown (10YR 5/3) gravelly loamy sand; moderate medium platy structure; friable; common fine distinct gray (10YR 5/1) areas of iron depletion, and common fine prominent strong brown (7.5YR 5/6) soft masses of iron oxides; 30 percent rock fragments; moderately acid.

2R—30 inches, light gray (10YR 7/2) sandstone bedrock.

The thickness of the solum and depth to bedrock ranges from 20 to 40 inches. Redoximorphic features occur within 30 inches of the mineral soil surface. Rock fragments dominantly range from 0 to 35 percent by volume.

Some pedons have a thin Oe or Oi horizon.

The Ap or A horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 2 or 3. Texture is fine sandy loam, sandy loam, loamy fine sand or loamy sand in the fine earth fraction. Reaction is very strongly acid to slightly acid.

The E horizon, if present, has hue of 5YR or 7.5YR, value of 4 to 6, and chroma of 2 or 3. Texture is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction is very strongly acid to slightly acid.

The Bs horizons have hue of 5YR or 7.5YR, value of 4 or 5 and chroma of 3 to 5.

Texture is loamy fine sand, loamy sand, fine sand and sand in the fine earth fraction. Reaction is very strongly acid to slightly acid.

The C horizon has hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 or 4. Faint to prominent redox concentrations or depletions are commonly present. Texture is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction is very strongly acid to slightly acid.

Skerry Series

The Skerry series consists of very deep, moderately well drained soils on upland glacial till plains. These soils formed in loamy deposits having dense substrata. Slopes range from 3 to 15 percent.

The Skerry soils are in a drainage sequence with well drained Becket soils and somewhat poorly drained Adirondack soils. Skerry soils are also near the Tunbridge, Conic, Chazy, Sabattis, and Beseman soils on the landscape. The Skerry soils are very deep to bedrock whereas the Tunbridge, Conic and Chazy soils are 20 to 40 inches deep. Skerry soils do not have redoximorphic features above 20 inches deep as in Sabattis and Beseman soils (fig. 25).

Typical pedon of Skerry fine sandy loam, gently sloping, very bouldery, in the Town of Ellenburg, about 600 feet south of Arno Road along the unpaved portion of Sharett Road, then 120 feet west of Sharett Road in woodland; USGS Ellenburg Mountain topographic quadrangle, lat. 44 degrees 52 minutes 18 seconds N. and long. 73 degrees 50 minutes 27 seconds W., NAD 1927:

A—0 to 3 inches, black (10YR 2/1) fine sandy loam; moderate fine granular structure; very friable; many fine and very fine, common medium, and few coarse roots; 10 percent rock fragments; very strongly acid; abrupt smooth boundary.

E—3 to 5 inches, reddish gray (5YR 5/2) fine sandy loam; weak fine granular structure; friable; common fine, very fine, and medium roots; 10 percent rock fragments; very strongly acid; abrupt wavy boundary.

Bh—5 to 6 inches; dark reddish brown (5YR 2.5/2) fine sandy loam; moderate fine granular structure; friable; common fine, very fine and medium roots; 10 percent rock fragments; very strongly acid; clear smooth boundary.

Bhs—6 to 9 inches, dark reddish brown (5YR 3/3) fine sandy loam; moderate fine granular structure; friable; common fine, very fine and medium roots; 10 percent rock fragments; very strongly acid; clear irregular boundary.

Bs1—9 to 16 inches, dark reddish brown (5YR 3/4) fine sandy loam, moderate fine and medium granular structure; friable; common fine, very fine and medium roots; 10 percent rock fragments; very strongly acid; clear smooth boundary.

Bs2—16 to 21 inches, dark brown (7.5YR 3/4) fine sandy loam; moderate medium and fine subangular blocky structure; friable; common fine and very fine, and few medium roots; 10 percent rock fragments; strongly acid; clear wavy boundary.

BC—21 to 24 inches, brown (10YR 4/3) gravelly sandy loam; weak medium and fine subangular blocky structure; firm; few fine and very fine roots; few medium distinct grayish brown (10YR 5/2) areas of iron depletion and common fine distinct dark brown (7.5YR 4/4) soft masses of iron oxides; 22 percent rock fragments (including 5 percent cobbles and 2 percent stones); strongly acid; abrupt smooth boundary.

Cd—24 to 72 inches, brown (10YR 5/3) gravelly sandy loam (structural plates are 70 percent sandy loam and fine sandy loam, and 30 percent loamy sand); weak thick and medium platy structure grading to massive with depth; very firm; 28 percent rock fragments (including 10 percent cobbles and 3 percent stones); strongly acid.

The thickness of the solum ranges from 15 to 36 inches. Redoximorphic features occur within 30 inches of the mineral soil surface. Rock fragments range from 5 to 30 percent in the solum and from 5 to 40 percent in the substratum.

The O horizon, if present, is neutral or has hue of 5YR to 10YR, value of 2 to 4, and chroma of 0 to 4.

The A horizon has hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 1 or 2. The Ap horizon, where present, has hue of 10YR, value of 3 or 4, and chroma of 2 to 4. Texture is fine sandy loam or sandy loam in the fine earth fraction. Unless limed, reaction ranges from very strongly acid to slightly acid.

The E horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 or 2. Texture is fine sandy loam or sandy loam in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The Bhs or Bh horizon has hue of 2.5YR to 7.5YR, value of 2 to 4, and chroma of 1 to 4. Texture is fine sandy loam and sandy loam in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The Bs horizon has hue of 2.5YR to 7.5YR, value of 2 to 6, and chroma of 3 to 8. Texture is fine sandy loam or sandy loam in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The BC horizon has hue of 10YR to 5Y, value of 3 to 6, and chroma of 2 to 6.

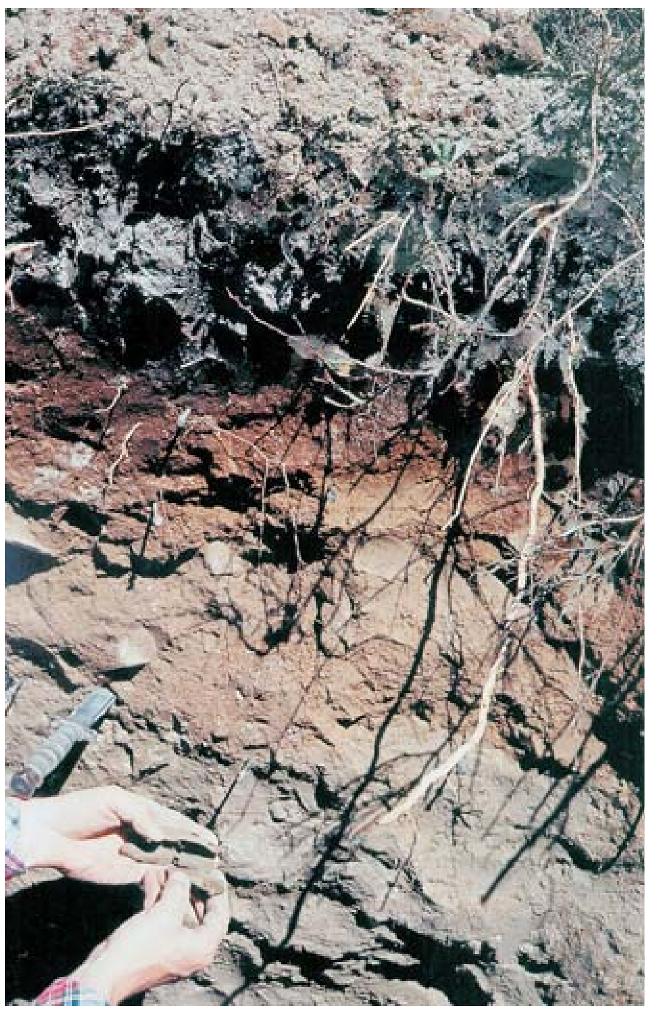

Figure 25.—A profile of Skerry fine sandy loam with the firm, dense substratum at and below 2 feet deep (just above the hand). Faint redoximorphic features are in the horizon where the knife is inserted.

Texture is fine sandy loam, sandy loam, loamy fine sand or loamy sand in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The Cd horizon has hue of 10YR to 5Y, value of 4 to 7, and chroma of 2 to 6. Texture of loamy structural plates is fine sandy loam or sandy loam in the fine earth fraction. The texture of sand lenses range from loamy fine sand to coarse sand. Reaction ranges from very strongly acid to neutral.

Skylight Series

The Skylight series consists of shallow, well drained to somewhat excessively drained soils on high elevation mountains and ridges. These soils formed in sandy material overlain by organic material. Slopes range from 15 to 70 percent.

Skylight soils are near Ricker and Glebe soils on the landscape in Clinton County. The Skylight soils have thinner organic mantles than Ricker soils. Skylight soils are shallow to bedrock whereas Glebe soils are moderately deep.

Typical pedon of Skylight loamy sand, in a unit of Ricker-Couchsachraga-Skylight complex, 35 to 80 percent slopes, very bouldery, Essex County, New York; approximately 1/2 mile up the Mt. Colden trail from Lake Colden, at 3,500 feet elevation; USGS Mt. Marcy topographic quadrangle; lat. 44 degrees 07 minutes 20 seconds N. and long. 73 degrees 58 minutes 8 seconds W., NAD 1927:

Oe—0 to 2 inches; dark reddish brown (5YR 2.5/2) hemic material; weak fine granular structure; very friable; common fine and medium, and few coarse roots; extremely acid; gradual wavy boundary.

Oa—2 to 5 inches; black (5YR 2.5/1) sapric material; weak fine granular structure; very friable; common fine and medium, and few coarse roots; extremely acid; abrupt wavy boundary.

E—5 to 9 inches; dark gray (5YR 4/1) loamy sand; weak medium subangular blocky structure; friable; few fine, medium and coarse roots; few medium distinct yellowish red (5YR 4/6) mottles; 2 percent rock fragments (mostly pebbles); strongly acid; clear wavy boundary.

Bh—9 to 15 inches; black (5YR 2.5/1) loamy sand; weak medium subangular blocky structure; smeary; common fine and medium, and few coarse roots; 2 percent rock fragments (mostly pebbles); very strongly acid; abrupt wavy boundary.

R—15 inches; anorthisite bedrock.

The thickness of the solum and depth to bedrock range from 10 to 20 inches from the mineral soil surface. Rock fragment content generally ranges from 0 to 15 percent throughout the solum, but ranges up to 30 percent in some pedons. Stones and boulders cover up to 3 percent of the surface.

The O horizon has hue of 10R to 10YR, value of 2 or 3, and chroma of 1 or 2, (or it is neutral). Reaction ranges from extremely acid to strongly acid.

The E horizon has hue of 10R to 10YR, value of 3 to 6, and chroma of 1 to 3, (or it is neutral). Texture is coarse sand, sand, fine sand, loamy sand, or loamy fine sand in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The Bh horizon has hue of 10R to 7.5YR, value of 2 or 3, and chroma of 1 to 3, (or it is neutral). Texture is coarse sand, sand, fine sand, loamy sand, or loamy fine sand in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

Some pedons have a Bhs and/or a Bs horizon. The Bhs horizon, where present, has hue of 10YR to 7.5YR, and value and chroma of 3 or less. The Bs horizon has hue of 2.5YR to 7.5YR, value of 3 or 4, and chroma of 3 to 6. Textures is coarse sand, sand, fine sand, loamy sand, or loamy fine sand in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

Success Series

The Success series consists of very deep, somewhat excessively drained soils on upland plains at the foothills of the Adirondack Mountains. These soils formed in cobbly or gravelly glacial till deposits. Slopes range from 10 to 35 percent.

The Success soils are on a landscape near the Wallace, Colton, Sunapee, Skerry, Adirondack, and Lyonmounten soils. The Success soils have very gravelly or cobbly subsoil, whereas Wallace soils have few or no rock fragments. The Success soils have cemented subsoil while Colton soils may have only discontinuous orstein. Success soils are sandier and more gravelly than the moderately well drained Sunapee and Skerry soils, the somewhat poorly drained Adirondack soils, and the poorly drained Lyonmounten soils.

Typical pedon of Success cobbly sandy loam, moderately steep, very bouldery, in the Town of Dannemora, about 200 feet south of culvert draining Bradley Pond on Bradley Pond Road, in a gravel pit about 200 feet east of Bradley Pond Road in a wooded area; USGS Lyon Mountain topographic quadrangle, lat. 44 degrees 44 minutes 44 seconds N. and long. 73 degrees 54 minutes W., NAD 1927:

A—0 to 2 inches, very dark grayish brown (10YR 3/2) cobbly sandy loam; weak fine granular structure; friable; many fine and very fine roots; 20 percent rock fragments; moderately acid; clear wavy boundary.

E—2 to 8 inches, pinkish gray (5YR 6/2) cobbly sandy loam; massive; very friable; few fine and very fine roots; 30 percent rock fragments; moderately acid; abrupt wavy boundary.

Bh—8 to 10 inches, dark reddish brown (5YR 2.5/2) gravelly sandy loam; weak fine subangular blocky structure; very firm; few fine and very fine roots; 30 percent rock fragments; very strongly acid; clear wavy boundary.

Bhs—10 to 13 inches, dark reddish brown (5YR 3/3) very gravelly sandy loam; massive; 90 percent weak cementation; very firm; few fine and very fine roots; 40 percent rock fragments; very strongly acid; gradual wavy boundary.

Bs—13 to 18 inches, reddish brown (5YR 4/4) very gravelly loamy sand; massive; about 90 percent weak cementation; very firm; few fine and very fine roots; 40 percent rock fragments; very strongly acid; clear irregular boundary.

BCm1—18 to 25 inches, yellowish brown (10YR 5/4) very cobbly loamy sand; weak medium and thick platy structure; 90 percent weak cementation; common 1/8" thick strong brown (7.5YR 5/6) horizontal streaks; firm; few very fine, fine, and medium roots; 40 percent rock fragments; very strongly acid; clear irregular boundary.

BC2—25 to 37 inches, brown (10YR 5/3) and yellowish brown (10YR 5/4) very gravelly loamy sand; weak medium and thick platy structure; about 50 percent weak cementation; firm; 40 percent rock fragments; strongly acid; clear wavy boundary.

C—37 to 72 inches, brown (10YR 5/3) gravelly loamy sand; massive; friable; 25 percent rock fragments; strongly acid.

The thickness of the solum ranges from 30 to 50 inches. Depth to the cemented BC horizon ranges from 15 to 35 inches. Depth to bedrock is greater than 60 inches. Rock fragments range from 15 to 60 percent by volume.

The Oi, Oe, or Oa horizon, when present, has hue of 5YR or 7.5YR, value of 2 or 3, and chroma of 0 to 2. It is sandy loam or coarse sandy loam in the fine earth fraction. Reaction is extremely acid or very strongly acid.

The A horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 to 3. It is sandy loam or fine sandy loam in the fine earth fraction. Reaction is extremely acid to moderately acid.

The E horizon has hue of 5YR to 10YR, value of 4 to 7, and chroma of 1 or 2. It is fine sandy loam, loam, sandy loam, or loamy sand in the fine earth fraction. Reaction is extremely acid to moderately acid.

The Bh and Bhs horizon has hue of 2.5YR to 7.5YR, value of 2 or 3 and chroma of 1 to 3. It is fine sandy loam, sandy loam, or loamy coarse sand in the fine earth fraction. Reaction is extremely acid to moderately acid.

The Bs horizon has hue of 5YR or 7.5YR, value of 3 to 6, and chroma of 3 to 8. It is fine sandy loam, sandy loam, or loamy sand in the fine earth fraction. Reaction is extremely acid to moderately acid.

The BC horizon has hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 6. It is loamy sand, loamy coarse sand or sand in the fine earth fraction. Reaction is extremely acid to moderately acid.

The C horizon has hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 2 to 6. It is loamy sand, loamy coarse sand or sand in the fine earth fraction. Reaction is very strongly acid to slightly acid.

Summerville Series

The Summerville series consists of shallow, well drained soils on limestone (or dolomitic limestone) bedrock controlled lowlands. They formed in loamy glacial till deposits. Slopes range from 0 to 15 percent.

The Summerville soils are near the Neckrock, Hogansburg, Grenville, Coveytown and Muskellunge soils on the landscape. The shallow Summerville soils are on similar landforms as the moderately deep Neckrock soils. The Summerville soils have bedrock within 20 inches of the surface whereas Hogansburg, Grenville, Coveytown and Muskellunge soils are very deep.

Typical pedon of Summerville loam, in a Neckrock-Summerville complex, strongly sloping, very rocky, in the Town of Chazy, about 0.25 mile south of Ridge Road intersection with Old Route 348, and 70 feet west of Old Route 348 in wooded area; USGS Beekmantown topographic quadrangle, lat. 44 degrees 50 minutes 59 seconds N. and long. 73 degrees 28 minutes 54 seconds W., NAD 1927:

A—0 to 5 inches, very dark grayish brown (10YR 3/2) loam; moderate fine and medium subangular blocky structure parting to moderate fine and very fine granular; very friable; many fine and very fine, common medium and few coarse roots; 5 percent rock fragments; slightly acid; clear smooth boundary.

Bw—5 to 12 inches, brown (10YR 4/3) loam; moderate medium subangular blocky structure; very friable; many fine, common medium and few coarse roots; 10 percent rock fragments; slightly acid; abrupt smooth boundary.

2R—12 inches, dark gray (N 4/0) massive limestone bedrock.

The thickness of the solum and depth to bedrock range from 10 to 20 inches. Rock fragments range from 0 to 35 percent by volume.

The A horizon has hue of 5YR to 10YR, value of 2 or 3 and chroma of 0 to 3. Texture is sandy loam, fine sandy loam, very fine sandy loam, loam, or silt loam in the fine earth fraction. Reaction ranges from slightly acid to moderately alkaline.

The Bw horizon has hue of 5YR to 10YR, value of 2 to 6, and chroma of 3 to 8. Texture is sandy loam, fine sandy loam, very fine sandy loam, loam, or silt loam in the fine earth fraction. Reaction ranges from slightly acid to moderately alkaline.

Some pedons have a BC horizon with hue of 5YR to 10YR, value of 3 to 6, and chroma of 2 to 4. Texture is sandy loam, fine sandy loam, very fine sandy loam, loam, or silt loam in the fine earth fraction. Reaction ranges from slightly acid to moderately alkaline.

Sunapee Series

The Sunapee series consists of very deep, moderately well drained soils on upland glacial till plains. These soils formed in friable, loamy ablation till. Slopes range from 0 to 8 percent.

The Sunapee soils are in a drainage sequence with the well drained Monadnock soils. Sunapee soils are also near the Schroon, Peasleeville, Adirondack, Sabattis and Wonsqueak soils on the landscape. The Sunapee soils have a more reddish brown subsoil and are slightly more acid than Schroon and Peasleeville soils. Sunapee soils do not have redoximorphic features in the upper spodic and lack dense substrata which are characteristic of Adirondack soils. The Sunapee soils have fewer redoximorphic features in the solum and less organic matter in the surface than the very poorly drained Sabattis and Wonsqueak soils.

Typical pedon of Sunapee fine sandy loam, gently sloping, very bouldery, in the Town of Dannemora, about 0.5 mile west of intersection with Chazy Lake Road and 1.0 mile north of NY Route 374 in woodland; USGS Ellenburg Mountain topographic quadrangle, lat. 44 degrees 45 minutes 39 seconds N. and long. 73 degrees 51 minutes 13 seconds W., NAD 1927:

A—0 to 3 inches, dark brown (7.5YR 3/2) fine sandy loam; weak fine and very fine granular structure; very friable; many fine, very fine and medium roots; 10 percent rock fragments (including 5 percent cobbles and stones); very strongly acid; abrupt wavy boundary.

E—3 to 7 inches, brown (7.5YR 5/2) fine sandy loam; weak coarse and medium subangular blocky structure; friable; many fine, very fine and medium, and common coarse roots; many fine and very fine pores; 10 percent rock fragments; very strongly acid; abrupt wavy boundary.

Bhs—7 to 10 inches, dark reddish brown (5YR 3/3) fine sandy loam; weak medium and fine subangular blocky structure; friable; many fine and very fine, common medium, and few coarse roots; common fine and very fine pores; 10 percent rock fragments; very strongly acid; abrupt wavy boundary.

Bs1—10 to 19 inches, reddish brown (5YR 4/4) and yellowish red (5YR 4/6) fine sandy loam; weak medium and coarse subangular blocky structure; friable; many fine and very fine, common medium, and few coarse roots; common fine and very fine pores; 10 percent rock fragments; very strongly acid; clear wavy boundary.

Bs2—19 to 25 inches, brown (7.5YR 5/4) fine sandy loam; weak coarse and medium subangular blocky structure; friable; common very fine, fine and medium, and few coarse roots; common fine and very fine pores; common fine and medium distinct pale brown (10YR 6/3) and few fine distinct pinkish gray (7.5YR 6/2) areas of iron depletion; 10 percent rock fragments; very strongly acid; clear wavy boundary.

BC—25 to 39 inches, mixed brown (7.5YR 4/4) and dark yellowish brown (10YR 4/4) fine sandy loam; weak thick and medium platy structure; friable (firm in place); few fine and very fine roots; common fine and medium pores; common coarse and medium distinct strong brown (7.5YR 5/6) and faint strong brown (7.5YR 4/6) soft masses of iron oxides, and few fine faint pale brown (10YR 6/3) areas of iron depletion; 13 percent rock fragments; very strongly acid; clear smooth boundary.

C1—39 to 51 inches, brown (7.5YR 4/4) gravelly fine sandy loam; massive with weak medium and thick plate-like divisions (common pinkish gray (7.5YR 6/2) vertical cleavage plains); friable (firm in place); few fine and very fine roots; common medium and fine pores; common medium and coarse distinct strong brown (7.5YR 5/6) soft masses of iron oxides and common medium distinct pale brown (10YR 6/3) areas of iron depletion; 20 percent rock fragments; very strongly acid; gradual wavy boundary.

C2—51 to 72 inches, brown (7.5YR 4/4) gravelly fine sandy loam; massive; friable; few fine and medium pores; few coarse and medium distinct brown (7.5YR 5/2) areas of iron depletion, and few fine distinct strong brown (7.5YR 5/6) and faint strong brown (7.5YR 4/6) soft masses of iron oxides; 20 percent rock fragments; very strongly acid.

The thickness of the solum ranges from 18 to 39 inches. Redoximorphic features occur within 30 inches of the mineral soil surface. Rock fragments range from 5 to 35 percent by volume in the solum and 5 to 55 percent in the substratum.

The A horizon has hue 5YR to 10YR, value of 2 or 3, and chroma of 1 or 2. Some pedons have an Ap horizon that has hue of 10YR, with value and chroma of 2 to 4. It is fine sandy loam or loam in the fine earth fraction. Unless the soil is limed, reaction ranges from extremely acid to strongly acid.

The E horizon has hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 1 or 2. It is fine sandy loam, sandy loam or loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The Bh or Bhs horizon has a hue of 2.5YR to 7.5YR, value of 2 or 3, and chroma of 1 to 4. It is fine sandy loam or sandy loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The Bs horizon has a hue of 5YR or 7.5YR, value of 3 to 5, and chroma of 3 to 6. It is fine sandy loam or sandy loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The BC horizon has a hue of 7.5YR to 5Y, value of 4 to 6 and chroma of 2 to 6. It is fine sandy loam or sandy loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The C horizon has hue of 7.5YR to 5Y, value of 4 to 6 and chroma of 2 to 4. It is fine sandy loam or sandy loam in the fine earth fraction. Loamy sand or loamy fine sand is below a depth of 30 inches in some pedons. Reaction ranges from extremely acid to moderately acid.

Swanton Series

The Swanton series consists of very deep, somewhat poorly drained soils on lake plains and on depressions of uplands. These soils were formed in a loamy mantle over clayey lacustrine sediments. Slopes range from 0 to 3 percent.

Swanton soils are associated with moderately well drained Flackville soils and very poorly drained Pinconning soils. The Swanton soils are also commonly on landscapes adjacent to Muskellunge, Hailesboro, Adjidaumo, Roundabout and Mino soils. The Swanton soils differ from the Muskellunge, Hailesboro and Adjidaumo soils in having more sand in the subsoil. Swanton soils differ from the somewhat poorly drained Roundabout and Mino soils in having a clayey substratum within 40 inches deep.

Typical pedon of Swanton very fine sandy loam, in the Town of Chazy, about 1,000 feet east of the intersection of Reynolds Road and US Route 9, and about 525 feet south of Reynolds Road in a wooded area; USGS Beekmantown topographic quadrangle, lat. 44 degrees 48 minutes 38 seconds N. and long. 73 degrees 25 minutes 49 seconds W., NAD 1927:

Ap—0 to 9 inches, very dark grayish brown (10YR 3/2) very fine sandy loam, light brownish gray (10YR 6/2) dry; moderate medium subangular blocky structure parting to weak medium granular; very friable; many fine and very fine, common medium, and few coarse roots; slightly acid; abrupt smooth boundary.

Bw1—9 to 17 inches, brown (10YR 5/3) fine sandy loam; weak medium and coarse subangular blocky structure; friable; many fine and very fine, and common medium roots; many fine and medium distinct yellowish brown (10YR 5/6) and common fine distinct dark yellowish brown (10YR 4/4) soft masses of iron oxides, and common fine and medium faint grayish brown (10YR 5/2) areas of iron depletion; neutral; clear smooth boundary.

Bw2—17 to 24 inches, brown (10YR 5/3) fine sandy loam; moderate medium and coarse subangular blocky structure; very friable; few very fine and fine roots; gray (10YR 5/1) on faces of peds; common medium and coarse distinct yellowish

brown (10YR 5/6) and common medium faint yellowish brown (10YR 5/4) soft masses of iron oxides; 1 percent rock fragments; neutral; clear smooth boundary.

Bg—24 to 31 inches, grayish brown (10YR 5/2) fine sandy loam; weak coarse and medium subangular blocky structure; friable; few very fine roots; gray (10YR 5/1) on faces of peds; many medium and coarse distinct dark yellowish brown (10YR 4/6) soft masses of iron oxides; neutral; abrupt smooth boundary.

2Cg1—31 to 50 inches, grayish brown (10YR 5/2) silty clay; massive; firm; many medium distinct dark yellowish brown (10YR 4/6) and few fine distinct yellowish brown (10YR 5/6) soft masses of iron oxides; neutral; clear smooth boundary.

2Cg2—50 to 72 inches, dark gray (10YR 4/1) clay; massive; firm; few fine distinct yellowish brown (10YR 5/4) soft masses of iron oxides; slightly alkaline.

The thickness of the solum and depth to underlying clayey material range from 18 to 40 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments range from 0 to 3 percent by volume in the solum and are generally absent in the underlying clayey horizons.

The Ap or A horizon has hue of 7.5YR to 2.5Y, value of 2 to 4, and chroma of 1 or 2. Texture is sandy loam, fine sandy loam or very fine sandy loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The Bw horizon has hue of 7.5YR to 5Y, value of 3 to 6, and chroma of 1 to 4. Texture is sandy loam, fine sandy loam or very fine sandy loam in the fine earth fraction, and less commonly loamy fine sand. Reaction ranges from strongly acid to neutral.

The Bg horizon has hue of 7.5YR to 5Y, value of 3 to 6, and chroma of 1 or 2. Texture is sandy loam or fine sandy loam in the fine earth fraction, and less commonly loamy fine sand. Reaction ranges from strongly acid to neutral.

The 2C horizon has hue of 10YR to 5GY (or it is neutral), value of 4 to 6, and chroma of 0 to 4. Texture is silty clay loam, silty clay or clay in the fine earth fraction. Reaction ranges from moderately acid to moderately alkaline.

Topknot Series

The Topknot series consists of shallow, somewhat poorly drained soils on nearly level benches and low areas of bedrock controlled uplands. These soils formed in loamy glacial till material. Slopes range from 0 to 8 percent.

The Topknot soils are in a drainage sequence with the well drained Irona soils. Topknot soils are also near the Chazy, Conic, Peasleeville, Schroon and Sunapee soils on the landscape. Topknot soils were formed in a thinner soil mantle than the moderately deep Chazy and Conic soils, and the very deep Peasleeville, Schroon and Sunapee soils.

Typical pedon of Topknot cobbly loam, within a map unit of Topknot-Chazy complex, gently sloping, rocky, in the Town of Mooers, about 2,700 feet east of intersection of Canaan Road and Green Valley Road, and 2,500 feet north of Green Valley Road in a pasture; USGS Ellenburg Depot topographic quadrangle, lat. 44 degrees 55 minutes 38 seconds N. and long. 73 degrees 47 minutes 14 seconds W., NAD 1927:

A—0 to 7 inches, very dark brown (10YR 2/2) cobbly loam; grayish brown (10YR 5/2 dry); weak medium and fine granular structure; very friable; many very fine roots; many fine and very fine pores; 25 percent rock fragments (including 10 percent gravels); slightly acid; clear smooth boundary.

Bw—7 to 14 inches, brown (10YR 5/3) gravelly loam; weak medium and fine subangular blocky structure; friable; common very fine roots; many fine and very fine pores; many (50percent) medium faint grayish brown (10YR 5/2) areas of iron depletion and many fine and medium distinct yellowish brown (10YR 5/6) soft

masses of iron oxides on faces of peds mostly in lower part of horizon; 20 percent rock fragments; moderately acid; abrupt smooth boundary.
2R—14 inches; light gray (10YR 7/2) sandstone bedrock.

The thickness of the solum and depth to bedrock range from 10 to 20 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Rock fragments consisting mainly of sandstone and granite range from 5 to 30 percent by volume throughout.

The A horizon has hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 1 to 3. Some pedons have an Ap horizon up to 10 inches thick with value of 3 or 4 (6 dry), and chroma of 2 or 3. Texture is fine sandy loam or loam in the fine earth fraction. Reaction is strongly acid to neutral unless limed.

The Bw horizon has hue of 7.5YR to 2.5Y, value of 4 or 5, and chroma of 2 to 4. Texture is sandy loam, fine sandy loam or loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

Some pedons have a BC horizon with hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 4. Texture is sandy loam, fine sandy loam or loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

Trout River Series

The Trout River series consists of very deep, excessively drained and somewhat excessively drained soils on glacial lake beach ridges and outwash plains. These soils formed in very gravelly or cobbly and sandy material. Slopes range from 3 to 25 percent.

The Trout River soils are in a complex with Colosse soils. Trout River soils are also near Fahey, Coveytown, Cook and Wainola soils on the landscape. The Trout River soils lack redoximorphic features in the subsoil which is present in moderately well drained Fahey soils. Trout River soils do not have a loamy substratum as in the somewhat poorly drained Coveytown and very poorly drained Cook soils. Trout River soils have more rock fragments and lack redoximorphic features in comparison to Wainola soils.

Typical pedon of Trout River very gravelly loamy sand, in a Colosse-Trout River complex, strongly sloping, very stony unit, in the Town of Altona, about 1/8 mile east on Recore Road from junction with Route NY-190 and about 60 feet southeast of road at edge of old gravel pit; USGS West Chazy topographic quadrangle, lat. 44 degrees 47 minutes 51 seconds N. and long. 73 degrees 34 minutes 3 seconds W., NAD 1927:

Oe—0 to 1 inch, black (10YR 2/1) moderately decomposed leaves and twigs.
A—1 to 3 inches, very dark brown (10YR 2/2) very gravelly loamy sand; weak fine granular structure; very friable; few medium and coarse, common fine, and many very fine roots; 35 percent rock fragments; very strongly acid; abrupt smooth boundary.
E—3 to 6 inches, reddish gray (5YR 5/2) very gravelly loamy sand; weak fine subangular blocky structure; very friable; few medium and coarse, common fine, and many very fine roots; 35 percent rock fragments; very strongly acid; abrupt wavy boundary.
Bhs—6 to 8 inches, dark reddish brown (5YR 3/3) very gravelly loamy sand; weak fine subangular blocky structure; friable; many very fine and common fine roots; 35 percent rock fragments; very strongly acid; clear irregular boundary.
Bs—8 to 17 inches, brown (7.5YR 4/4) very gravelly loamy sand; weak fine subangular blocky structure; very friable; many very fine and common fine roots; 45 percent rock fragments; strongly acid; clear wavy boundary.
BC—17 to 31 inches, mixed strong brown (7.5YR 4/6) and brown (10YR 5/3) extremely gravelly sand; single grain; loose; common fine and very fine roots; 60 percent rock fragments; strongly acid; clear wavy boundary.

C—31 to 72 inches, mixed brown (dominant 10YR 4/3) extremely gravelly sand; single grain; loose; few very fine roots; 65 percent rock fragments; moderately acid.

The thickness of the solum ranges from 24 to 36 inches. Depth to bedrock is greater than 60 inches. Rock fragments range from 10 to 35 percent by volume in the surface, 20 to 60 percent in the subsoil, and from 35 to 70 percent in the substratum.

The Oe horizon has hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 1 or 2. It is slightly decomposed organic material. Reaction is very strongly acid or strongly acid.

The A horizon has hue of 7.5YR or 10YR, value of 2 to 5, and chroma of 1 to 3. It ranges from fine sandy loam to sand in the fine earth fraction. Reaction is very strongly acid or strongly acid.

The E horizon has hue of 5YR to 10YR, value of 5 to 7, and chroma of 2 or 3. It ranges from fine sandy loam to sand in the fine earth fraction. Reaction is very strongly acid or strongly acid.

The Bhs horizon has hue of 5YR or 7.5YR, value of 2 or 3, and chroma of 1 to 3, or hue of 10YR, value and chroma of 1 or 2. It ranges from fine sandy loam to sand in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The Bs horizon has hue of 5YR or 7.5YR, value of 4 or 5, and chroma of 3 to 6. It is loamy sand or sand in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The BC horizon has hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 2 to 6. It is loamy sand or sand in the fine earth fraction. Reaction ranges from strongly acid to neutral.

The C horizon has hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 2 to 4. It is loamy sand or sand in the fine earth fraction. Reaction ranges from moderately acid to moderately alkaline.

Tughill Series

The Tughill series consists of very deep, very poorly drained soils on basin-like areas of upland glacial till plains. These soils formed in loamy glacial till having a high content of rock fragments. Slopes range from 0 to 5 percent.

Tughill soils are in drainage sequence with the somewhat excessively drained Hermon soils. The Tughill soils are also near the Adirondack, Sabattis, Searsport and Beseman soils. Tughill soils do not have spodic horizons like Adirondack soils. Tughill soils have more rock fragments than Sabattis and Searsport soils. Tughill soils have thinner organic deposits than the Beseman soils.

Typical pedon of Tughill cobbly mucky fine sandy loam (mixed), in a unit of Adirondack-Sabattis-Tughill complex, 0 to 8 percent slopes, very bouldery, in the Town of Morehouse, Hamilton County 780 feet south of New York state Route 8 at the point where the trail begins, that goes to the Fort Noble fire lookout tower; USGS Ohio topographic quadrangle, lat. 43 degrees 23 minutes 30 seconds N. and long. 74 degrees 49 minutes 40 seconds W., NAD 1927:

Oe—0 to 3 inches, black (5YR 2/1) mucky peat; unrubbed, 80 percent fibers; rubbed, 40 percent fibers; weak medium granular structure; very friable; many fine and medium roots; very strongly acid; clear smooth boundary.

Oa—3 to 7 inches, black (10YR 2/1) muck; unrubbed, 30 percent fibers; rubbed, 5 percent fibers; weak fine and medium granular structure; very friable; common fine roots; very strongly acid; abrupt wavy boundary.

A—7 to 13 inches, black (N 2/0) cobbly fine sandy loam; with about 5 percent light gray (10YR 6/1) sand grains; weak fine and medium granular structure; very friable; few fine rocks; 34 percent rock fragments, (cobbles and gravel, few stones); strongly acid; clear wavy boundary.

BA—13 to 19 inches, very dark gray (10YR 3/1) very gravelly sandy loam; weak

medium and fine subangular blocky structure; very friable; 35 percent rock fragments (cobbles, stones and gravel); slighty acid; gradual wavy boundary.

Bg1—19 to 29 inches, dark greenish gray (5GY 4/1) very gravelly fine sandy loam; weak medium subangular blocky structure; very friable; common coarse faint, black (5Y 2/1) organic stains; 35 percent rock fragments, (gravel, cobbles and stones); slightly acid; gradual wavy boundary.

Bg2—29 to 37 inches, dark grayish brown (2.5Y 4/2) very gravelly fine sandy loam; few fine iron modules of similar color; weak fine and medium subangular blocky structure; very friable; many medium and coarse prominent dark brown (7.5YR 4/4) soft masses of iron oxides on ped coats; 40 percent rock fragments (gravel, cobbles and stones); slightly acid; gradual wavy bonudary.

Cg—37 to 72 inches, dark grayish brown (10YR 4/2) very gravelly sandy loam; massive; firm; few fine distinct dark brown (7.5YR 4/4) soft masses of iron oxides in the upper part; 45 percent rock fragments (gravel, cobbles and stones); neutral.

The thickness of the solum ranges from 18 to 40 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments, mainly stones, cobbles, and gravel, range from 3 to 35 percent by volume in the A and E horizons, and 35 to 60 percent in the B and C horizons.

The O horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 or 2. It is composed of hemic or sapric material. Reaction ranges from extremely acid to strongly acid.

The A horizon has hue of 7.5YR to 2.5Y (or it is neutral), value of 2 or 3 and chroma of 0 to 2. Texture of the fine earth fraction is sandy loam, fine sandy loam, loam, or silt loam, with or without mucky analogs. Reaction ranges from extremely acid to strongly acid.

The E horizon, if present, has hue of 10YR or 2.5Y, (or it is neutral), has value of 5 or 6, and chroma of 0 to 2. Texture is sandy loam, fine sandy loam, loam, or silt loam in the fine earth fraction. Reaction ranges from extremely acid to strongly acid.

The B horizon has hue of 5YR to 5Y (or it is neutral), value of 4 to 6, and chromas of 0 to 2. It is sandy loam, fine sandy loam, or loam in the fine earth fraction. Reaction ranges from extremely acid to slightly acid.

The C horizon has hue of 5YR to 5Y (or it is neutral), value of 4 to 6, and chromas of 0 to 2. It is sandy loam, fine sandy loam, or loam in the fine earth fraction. Reaction is moderately acid to neutral.

Tunbridge Series

The Tunbridge series consists of moderately deep, well drained soils on uplands. These soils formed in loamy glacial till deposits over crystalline bedrock. Slopes range from 3 to 70 percent.

The Tunbridge soils are on a landscape near the Lyman, Ricker, Monadnock, Becket and Adirondack soils. Tunbridge soils are slightly deeper than the shallow Lyman soils. Tunbridge soils are dominantly mineral soil over bedrock compared to the dominantly organic Ricker soils. The Tunbridge soils differ from Monadnock, Becket and Adirondack soils in being moderately deep to bedrock. Also, Tunbridge soils lack the dense substrata common in Becket and Adirondack soils.

Typical pedon of Tunbridge fine sandy loam, in a map unit of the Tunbridge Lyman complex, strongly sloping, very bouldery, in the Town of Peru, 1/4 mile south of intersection of Patent Road and Mannix Road, and about 4400 feet west of Patent Road in woodland; USGS Peasleeville topographic quadrangle, lat. 44 degrees 35 minutes 10 seconds N. and long. 73 degrees 38 minutes 2 seconds W., NAD 1927:

A—0 to 1 inch, very dark brown (10YR 2/2) fine sandy loam; weak fine granular structure; very friable; common medium, fine and very fine roots; common medium and fine pores; 5 percent rock fragments; very strongly acid; abrupt wavy boundary.

BE—1 to 4 inches, reddish brown (5YR 4/3) fine sandy loam; weak medium subangular blocky structure; very friable; common fine and very fine roots; common medium, fine, and very fine pores; 5 percent rock fragments; extremely acid; abrupt wavy boundary.

Bs1—4 to 9 inches, reddish brown (5YR 4/4) gravelly loam; weak medium subangular blocky structure; very friable; common fine and very fine roots; common fine and very fine pores; 20 percent rock fragments; very strongly acid; clear wavy boundary.

Bs2—9 to 16 inches, yellowish red (5YR 4/6) loam; weak medium subangular blocky structure; friable; few fine and very fine roots; common fine and very fine pores; 10 percent rock fragments; very strongly acid; clear wavy boundary.

BC—16 to 26 inches, brown (7.5YR 4/4) gravelly fine sandy loam; weak medium and thick platy structure; very friable; few very fine roots; common fine and very fine pores; 20 percent rock fragments; very strongly acid; abrupt smooth boundary.

R—26 inches, crystalline bedrock.

The thickness of the solum ranges from 14 to 38 inches. Depth to bedrock ranges from 20 to 40 inches. Rock fragments range from 5 to 35 percent by volume.

The A horizon has hue of 5YR to 10YR, value of 2 to 5, and chroma of 0 to 4. It is sandy loam, fine sandy loam, very fine sandy loam or loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The BE or E horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 to 3. It is sandy loam, fine sandy loam, very fine sandy loam or loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Bhs horizon, where present, has hue of 5YR or 7.5YR, value and chroma of 3. It is sandy loam, fine sandy loam, very fine sandy loam or loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Bs horizon has hue of 5YR or 7.5YR, value of 4 to 6, and chroma of 4 to 6. It is sandy loam, fine sandy loam, very fine sandy loam or loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The BC horizon has hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 3 to 8. It is sandy loam, fine sandy loam, very fine sandy loam or loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The C horizon, where present, has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 2 to 6. It is sandy loam, fine sandy loam, very fine sandy loam or loam in the fine earth fraction. Reaction ranges from strongly acid to slightly acid.

Udifluvents

Udifluvents consist of very deep, well drained soils formed in sediments deposited by rivers and streams. Udifluvents are on the most actively flooded areas of alluvial plains in the county. This unit is named above the series level of classification because of the variability of the soil properties and the composition of the material in which it formed. Slopes range from 0 to 3 percent.

Udifluvents occur in a complex with somewhat poorly drained and poorly drained Fluvaquents. They are commonly adjacent to Lovewell, Cornish, Medomak, Rumney, Adams and Colton soils on the landscape. Udifluvents have soil profiles that vary in texture, whereas Lovewell, Cornish and Medomak soils have mainly silt loam and very fine sandy loam in the solum, and Rumney soils have mainly sandy loam or loam in the solum. Udifluvents lack spodic development which is characteristic of Adams and Colton soils.

Udifluvents are in areas of floodplains immediately adjacent to rivers and streams. Scouring, cutting, lateral erosion, changing stream channels and redeposition of sediments during frequent flooding are responsible for the variability in composition and properties of Udifluvents. Because of the wide range of texture and other variabilities, a typical pedon of Udifluvents is not provided.

Generally, the surface layer is 3 to 12 inches thick. The depth to bedrock is more than 60 inches. Redoximorphic features may occur within 50 inches of the mineral soil surface. Rock fragments range from 0 to 50 percent by volume.

The surface layer has hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 2 or 3. Texture generally ranges from loamy sand to loam in the fine earth fraction. Reaction is very strongly acid to neutral.

The substratum has hue of 7.5YR to 5Y, value of 3 to 5, and chroma of 2 to 6. Texture generally ranges from sand to silty clay loam in the fine earth fraction. Reaction is strongly acid to slightly alkaline.

Udipsamments

Udipsamments consist of very deep, well drained sandy sediments modified by human activity or deposited by Lake Champlain wave action. Slopes range from 0 to 35 percent, but are dominantly 0 to 3 percent.

Udipsamments commonly occur in a complex with Psammaquents. They also occur near the Plainfield, Adams, Deerfield, Croghan and Pipestone soils. Udipsamments are modified in the upper subsoil or lack soil development which is characteristic of these associated soils.

This taxonomic unit defines such miscellaneous areas as airport runway buffer zones, spoil material from iron mines, and beach deposits. Because the properties of Udipsamments vary from one place to another, a typical pedon is not described.

The surface layer is commonly 2 to 10 inches thick. Depth to bedrock is more than 60 inches. Rock fragments range from 0 to 15 percent.

Generally, the surface layer has hue of 7.5YR to 2.5Y, value of 3 to 5 and chroma of 1 to 4. Texture ranges from sand to loamy fine sand in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid.

The substratum has hue of 10YR to 5Y, value of 3 to 7 and chroma of 1 to 6. Texture ranges from coarse sand to loamy fine sand in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

Udorthents

Udorthents consist of very deep, well drained drained to somewhat poorly drained loamy sediments resulting from human activity such as use of fill material. Slopes range from 0 to 15 percent.

Udorthents occur on a wide variety of landscapes and soils. This map unit is commonly associated with miscellaneous map units such as urban areas and landfills.

Because the properties of Udorthents vary from one place to another, a typical pedon is not described.

The surface layer is commonly 2 to 10 inches thick. Depth to bedrock is more than 60 inches. Rock fragments range from 0 to 50 percent.

Generally, the surface layer has hue of 7.5YR to 2.5Y, value of 3 to 5 and chroma of 1 to 4. Texture ranges from sandy loam to silt loam in the fine earth fraction. Reaction ranges from very strongly acid to neutral.

The substratum has hue of 7.5YR to 2.5Y, value of 4 to 7 and chroma of 1 to 6. Texture ranges from sandy loam to silty clay loam in the fine earth fraction. Reaction ranges from strongly acid to slightly alkaline.

Waddington Series

The Waddington series consists of very deep, somewhat excessively drained soils on outwash plains and beach ridges. These soils formed in gravelly glacial outwash material. Slopes range from 0 to 8 percent.

The Waddington soils occur on landscapes near the Fahey, Coveytown, Croghan, Hogansburg and Malone soils. The Waddington soils lack redoximorphic features above 30 inch deep in contrast to moderately well drained Fahey soils. Waddington soils lack loamy glacial till deposits within 40 inches and redox concentrations as is characteristic of Coveytown soils. The Waddington soils are more loamy and gravelly than the moderately well drained Croghan soils. Waddington soils were formed in gravelly outwash deposits whereas Hogansburg and Malone soils were formed in loamy till deposits with typically fewer rock fragments.

Typical pedon of Waddington gravelly loam, 3 to 8 percent slope, in the Town of Mooers, about 3,500 feet north of the intersection of North Star Road with Hogle Road, and about 10 feet west of Hogle Road in a small gravel pit; USGS Mooers topographic quadrangle, lat. 44 degrees 59 minutes 58 seconds N. and long. 73 degrees 34 minutes 32 seconds W., NAD 1927:

Ap—0 to 9 inches, very dark grayish brown (10YR 3/2) gravelly loam; weak medium and fine granular structure; very friable; few medium and coarse, and many fine and very fine roots; 15 percent rock fragments; neutral; abrupt smooth boundary.

Bw1—9 to 17 inches, strong brown (7.5YR 4/6) very gravelly fine sandy loam; weak medium and fine subangular blocky structure parting to weak medium granular; very friable; few coarse, and many fine and very fine roots; 35 percent rock fragments; neutral; clear smooth boundary.

Bw2—17 to 26 inches, brown (7.5YR 4/4) very gravelly loam; weak medium subangular blocky structure; friable; many fine and very fine roots; 55 percent rock fragments; neutral; clear irregular boundary.

BC—26 to 31 inches, dark brown (7.5YR 3/4) very gravelly loamy sand; single grain; loose; few fine and very fine roots; 55 percent rock fragments; neutral; clear irregular boundary.

C—31 to 72 inches, mixed dark grayish brown (10YR 4/2), brown (10YR 4/3), and dark yellowish brown (10YR 4/4) extremely gravelly coarse sand; single grain; loose; few very fine roots in upper part; 60 rock fragments; moderately alkaline, strongly effervescent.

The thickness of the solum ranges from 18 to 30 inches. Depth to free carbonates ranges from 10 to 30 inches. Bedrock is deeper than 60 inches. Rock fragments range from 15 to 55 percent by volume in the solum, and from 40 to 65 percent in the C horizon.

The A or Ap horizon has hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 4. It commonly is sandy loam, fine sandy loam, or loam in the fine earth fraction. Reaction is slightly acid or neutral.

The Bw horizon has hue of 5YR to 10YR, value of 3 to 5, and chroma of 3 to 6. It commonly is sandy loam, loam, and fine sandy loam in the fine earth fraction. It is neutral or slightly alkaline.

The BC horizon has hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 6. It is loamy sand or sandy loam in the fine earth fraction. Reaction ranges from neutral to moderately alkaline.

The C horizon has hue of 7.5YR to 2.5Y, value of 4 or 5 and chroma of 2 to 4. It ranges from coarse sand to loamy sand in the fine earth fraction with varying degrees of stratification. Reaction is slightly alkaline or moderately alkaline.

Wainola Series

The Wainola series consists of very deep, somewhat poorly drained soils on outwash plains and glacial lake shorelines. These soils formed in sandy deposits. Slopes range from 0 to 3 percent.

The Wainola soils are in a drainage sequence with excessively drained and somewhat excessively drained Adams soils, moderately well drained Croghan soils, and poorly drained Deinache soils. The Wainola soils occur on landscapes near the Monadnock, Kalurah, Schroon, Swanton, Fahey and Coveytown soils. Wainola soils are more sandy and typically have less rock fragments than the loamy Monadnock, Kalurah and Schroon soils which occur on nearby glacial till landscapes. Wainola soils are more sandy in the subsoil and have less clay in the substratuum than Swanton soils. The Wainola soils have redoximorphic features within the subsoil and less rock fragments than Fahey soils. Wainola soils do not have a loamy substratum within 40 inches deep as in somewhat poorly drained Coveytown soils.

Typical pedon of Wainola loamy fine sand, in the Town of Mooers, about 3,200 feet south-southwest of intersection of LaValley Road and River Road, and about 2,600 feet southwest of A. Gonya farmhouse in brushy woodlot; USGS Mooers topographic quadrangle, lat. 44 degrees 55 minutes 48 seconds N. and long. 73 degrees 31 minutes 40 seconds W., NAD 1927:

Oi—0 to 1 inches, black (10YR 2/1) slightly decomposed roots and leaves.

A—1 to 4 inches, black (10YR 2/1) loamy fine sand; weak fine granular structure; very friable; many fine and very fine, and common medium roots; very strongly acid; abrupt wavy boundary.

E—4 to 7 inches, mixed brown (7.5YR 5/2 – 60 percent) and pinkish gray (7.5YR 6/2 – 40 percent) fine sand; single grain; loose; many fine and very fine, and few medium roots; very strongly acid; gradual wavy boundary.

Bs1—7 to 10 inches, dark reddish brown (5YR 3/4) loamy fine sand; very weak medium platy structure; common 3/4" dusky red (2.5YR 3/2) orstein nodules; friable; many fine and very fine roots; common medium distinct brown (7.5YR 4/4) soft masses of iron oxides; very strongly acid; clear wavy boundary.

Bs2—10 to 12 inches, reddish brown (5YR 4/4) fine sand; single grain; common 1/2" dusky red (2.5YR 3/2) orstein nodules; loose; common fine and very fine roots; common medium distinct brown (7.5YR 5/4) soft masses of iron oxides; strongly acid; clear wavy boundary.

Bs3—12 to 22 inches, strong brown (7.5YR 4/6) fine sand; single grain; few ¼ inch orstein nodules; loose; few very fine roots; common fine and medium distinct pinkish gray (7.5YR 6/2) areas of iron depletion, and many medium and coarse distinct light brown (7.5YR 6/4) and common medium faint strong brown (7.5YR 5/6) soft masses of iron oxides; strongly acid; gradual wavy boundary.

BC—22 to 34 inches, brown (10YR 5/3) fine sand; single grain; loose; few very fine roots; common fine prominent strong brown (7.5YR 5/6) soft masses of iron oxides, and few medium faint pinkish gray (7.5YR 6/2) areas of iron depletion; strongly acid; clear wavy boundary.

C—34 to 72 inches, light brownish gray (10YR 6/2) fine sand; single grain; loose; few fine distinct yellowish brown (10YR 5/6) and common medium and coarse distinct brownish yellow (10YR 6/6) soft masses of iron oxides; strongly acid.

The thickness of the solum ranges from 18 to 42 inches. Redoximorphic features occur within the spodic horizon and 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments range from 0 to 5 percent by volume throughout the soil.

The Ap or A horizon has hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 1 or 2. It is fine sand or loamy fine sand in the fine earth fraction. Reaction ranges from extremely acid to slightly acid.

The E horizon has hue of 7.5YR or 10YR, value of 5 to 7 and chroma of 2 or 3. It is fine sand or loamy fine sand in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The Bs horizon has hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 6. It is fine sand or loamy fine sand in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The BC horizon has hue of 5YR to 2.5Y, value of 4 to 6 and chroma of 2 to 6. It is fine sand or loamy fine sand in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

The C horizon has hue of 7.5YR to 2.5Y, value of 4 to 7 and chroma of 2 to 4. It is fine sand or loamy fine sand in the fine earth fraction. Reaction ranges from very strongly acid to slightly acid.

Wallace Series

The Wallace series consists of very deep, well drained soils on outwash plains, kames and deltas. These soils formed in sandy deposits. Slopes range from 0 to 35 percent.

The Wallace soils are on landscapes near the Success, Monadnock, Becket, Skerry and Adirondack soils. Wallace soils lack the high gravel and cobble content of Success soils. The Wallace soils are more sandy in the subsoil than Monadnock and Becket soils. Wallace soils also lack redoximorphic features present in moderately well drained Skerry soils and somewhat poorly drained Adirondack soils.

Typical pedon of Wallace fine sand, 8 to 15 percent slopes, in the Town of Dannemora, about 2.2 miles west of the intersection of Sunset Road with Standish Road, in a sand pit on the south edge of Sunset Road (Chateaugay Lake Road); USGS Lyon Mountain topographic quadrangle, lat. 44 degrees 43 minutes 37 seconds N. and long. 73 degrees 56 minutes 45 seconds W., NAD 1927:

A—0 to 2 inches, black (5YR 2.5/1) fine sand; weak fine and very fine granular structure; very friable; many fine roots; very strongly acid; abrupt irregular boundary.

E—2 to 8 inches, pinkish gray (5YR 6/2) fine sand; single grain; very friable; many fine, and common medium and coarse roots; very strongly acid; abrupt wavy boundary.

Bhsm—8 to 16 inches, mixed dark brown (7.5YR 3/2) and dark reddish brown (5YR 2.5/2) fine sand; massive; firm; 70 percent orstein; common medium and fine, and few coarse roots; strongly acid; abrupt wavy boundary.

Bsm 16 to 21 inches, dark reddish brown (5YR 3/4) fine sand; very weak medium subangular blocky structure; firm; 70 percent orstein; few fine and medium roots; strongly acid; clear wavy boundary.

BC—21 to 33 inches, dark yellowish brown (10YR 4/6) sand; single grain; loose (some slightly firm discontinous orstein); few fine and medium roots; moderately acid; clear smooth boundary.

C1—33 to 42 inches, yellowish brown (10YR 5/4) sand; single grain; loose; moderately acid; clear wavy boundary.

C2—42 to 72 inches, yellowish brown (10YR 5/4) fine sand; single grain; loose; moderately acid.

The thickness of the solum is 20 to 60 inches. Depth to bedrock is greater than 60 inches. Cemented material (orstein) is greater than 50 percent in the spodic horizons. Rock fragments range from 0 to 5 percent by volume.

The A horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 or 2. It is loamy sand, fine sand or sand in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid.

The E horizon has hue of 5YR to 10YR, value of 5 to 7, and chroma of 1 or 2. It is fine sand or sand in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid.

The Bhsm horizon has hue of 5YR or 7.5YR, value of 2 or 3, and chroma of 1 to 3. It is fine sand or sand in the fine earth fraction. Reaction ranges from very strongly acid to moderately acid.

The Bsm horizon has hue of 5YR or 7.5YR, value of 3 to 5, and chroma of 2 to 6. It is loamy fine sand, loamy sand, fine sand or sand in the fine earth fraction. Reaction ranges from strongly acid to slightly acid.

The BC horizon has hue of 5YR to 10YR, value and chroma of 4 to 6. It is fine sand or sand in the fine earth fraction. Reaction ranges from strongly acid to slightly acid.

The C horizon has hue of 5YR to 10YR, value of 5 or 6, and chroma of 4 to 6. It is fine sand or sand in the fine earth fraction. Reaction is moderately acid or slightly acid.

Wonsqueak Series

The Wonsqueak series consists of very deep, very poorly drained soil on ground moraines, outwash plains, lake plains and glacial till plains. These soils formed in organic deposits that are 16 to 51 inches thick over loamy mineral sediments. Slopes range from 0 to 2 percent.

The Wonsqueak soils are commonly adjacent to Bucksport, Runeberg, Cook, Sunapee, Schroon and Malone soils on the landscape. Wonsqueak soils have organic deposits up to 51 inches deep whereas Bucksport soils have deeper organic deposits. Wonsqueak soils have a thicker organic surface than the very poorly drained Runeberg and Cook soils which are dominantly mineral soils. The Wonsqueak soils also contrast with the dominantly mineral Sunapee, Schroon and Malone soils in having a dark-colored matrix.

Typical pedon of Wonsqueak muck, in the Town of Chazy, 0.8 mile west of Ridge Road at a point 1.25 mile north of the intersection of State Rt. 191 and Ridge Road in woodland; USGS Champlain topographic quadrangle, lat. 44 degrees 54 minutes 21 seconds N. and long. 73 degrees 29 minutes 9 seconds W., NAD 1927:

Oa1—0 to 7 inches, black (N 2/0) sapric material; moderate fine and medium granular structure; very friable; many fine and very fine, and few medium roots; 5 percent unrubbed fiber; strongly acid (5.2 in H2O); abrupt smooth boundary.

Oa2—7 to 23 inches, very dark brown (10YR 2/2) sapric material; weak very thick platy structure parting to weak medium subangular blocky; friable; common very fine, and few fine roots; 10 percent unrubbed fiber, 5 percent rubbed fiber; strongly acid (5.4 in H2O); clear smooth boundary.

Oa3—23 to 31 inches, very dark brown (10YR 2/2) sapric material; weak medium and coarse subangular blocky structure; friable; few very fine roots; 10 percent unrubbed fiber, 5 percent rubbed fiber; strongly acid (5.4 in H2O); abrupt smooth boundary.

Cg—31 to 72 inches, dark gray (10YR 4/1) silt loam; massive; slightly sticky; neutral.

The depth to the loamy substratum ranges from 16 to 51 inches. Woody fragments in the organic material range from 0 to 20 percent by volume. Rock fragments in the substratum range from 0 to 15 percent by volume.

The surface layer has hue of 2.5YR to 10YR (or it is neutral), value of 2 or 3 and chroma of 0 to 3. It is dominantly sapric material with some pedons having thin layers of hemic or fibric material. Reaction ranges from extremely acid to slightly acid in 0.01M calcium chloride.

The subsurface layer has hue of 2.5YR to 10YR, value of 2 or 3 and chroma of 1 or 2. It is dominantly sapric material having thin layers of hemic or fibric material. Reaction ranges from very strongly acid to slightly acid in 0.01M calcium chloride.

The bottom layer has hue of 2.5YR to 10YR, value of 2 or 3 and chroma of 1 or 2. It is dominantly sapric material with thin layers of hemic and fibric material in some pedons. Reaction ranges from very strongly acid to slightly acid in 0.01M calcium chloride.

The C horizon has hue of 5YR to 5GY (or it is neutral), value of 3 to 6, and chroma of 0 to 4. Texture ranges from fine sandy loam to silty clay loam in the fine earth fraction. Reaction ranges from strongly acid to neutral.

Worden Series

The Worden series consists of very deep, somewhat poorly drained soils on glaciated uplands. These soils formed in loamy deposits overlying dense basal till. Slopes range from 3 to 15 percent.

The Worden soils are in a drainage sequence with well drained Mundalite soils. Worden soils are on landscapes near the Hogback, Rawsonville and Sabattis soils. Worden soils are deeper than shallow Hogback soils and moderately deep Rawsonville soils. Worden soils have thinner organic surface layers and less gray matrix in the upper subsoil than very poorly drained Sabattis soils.

Typical pedon of Worden fine sandy loam, in an area mapped as a Mundalite-Worden complex, 3 to 15 percent slopes, very bouldery, in the Town of Dannemora, 0.2 mile south of the hamlet of Lyon Mountain on Standish Road, then 0.8 mile south on an unpaved hunting club road, then 200 feet east into woods; USGS Lyon Mountain topographic quadrangle, 44 degrees 42 minutes 15 seconds north Latitude and 73 degrees 54 minutes 43 seconds west Longitude, NAD 1927:

A—0 to 1 inch, black (10YR 2/1) fine sandy loam; weak fine and very fine granular structure; very friable; many fine and very fine, common medium, and few coarse roots; 7 percent rock fragments; extremely acid; clear smooth boundary.

E—1 to 4 inches, brown (7.5YR 4/2) fine sandy loam; weak coarse and medium subangular blocky structure; very friable; many fine and very fine, common medium, and few coarse roots; 10 percent rock fragments; very strongly acid; clear wavy boundary.

Bh—4 to 8 inches, dark brown (7.5YR 3/2) fine sandy loam; weak fine and medium subangular blocky structure; friable; moderately smeary; many fine and very fine, and common medium roots; 10 percent rock fragments; extremely acid; clear wavy boundary.

Bs1—8 to 17 inches, brown (7.5YR 5/4) fine sandy loam; weak medium subangular blocky structure; friable; weakly smeary; common fine and very fine, and few medium roots; common very fine and fine pores; common medium and coarse distinct pinkish gray (7.5YR 6/2) areas of iron depletion, and many medium distinct strong brown (7.5YR 5/6 and 4/6) soft masses of iron oxides (in the lower part); 10 percent rock fragments; very strongly acid; clear wavy boundary.

Bs2—17 to 21 inches, brown (7.5YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; weakly smeary; few fine and very fine roots; common very fine pores; common fine and medium distinct pinkish gray (7.5YR 6/2) areas of iron depletion, and many fine and medium distinct strong brown (7.5YR 5/6) soft masses of iron oxides; 10 percent rock fragments; very strongly acid; clear wavy boundary.

Cd1—21 to 31 inches, dark yellowish brown (10YR 4/4) cobbly fine sandy loam; massive with weak thick plate-like divisions; firm; few fine and very fine pores; grayish brown (10YR 5/2) on faces of peds; 10 percent cobbles, 5 percent gravel; strongly acid; clear wavy boundary.

Cd2—31 to 72 inches, brown (7.5YR 5/4) cobbly fine sandy loam; massive; firm; few very fine pores; common fine and medium faint pinkish gray (7.5YR 6/2) areas of iron depletion; 20 percent rock fragments; strongly acid.

The thickness of the solum ranges from 18 to 30 inches. Redoximorphic features occur within 20 inches of the mineral soil surface. Depth to bedrock is greater than 60 inches. Rock fragments are mostly pebbles and cobbles and range from 0 to 25 percent by volume.

The A horizon has hue of 7.5YR or 10YR (or it is neutral), value of 2 or 3, and chroma of 0 to 3. It is fine sandy loam, silt loam, or loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The E horizon has hue of 5YR to 10YR (or it is neutral), value of 4 or 5, and chroma of 0 to 3. It is fine sandy loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Bh horizon has hue of 2.5YR to 7.5YR (or it is neutral), value of 2 or 3, and chroma of 0 to 2. Texture is sandy loam, fine sandy loam, loam, or silt loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Bhs horizon, if present, has hue of 5YR to 10YR, and value and chroma of approximately 3 or less. Texture is sandy loam, fine sandy loam, loam, or silt loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Bs horizon has hue of 5YR or 7.5YR, value of 4 or 5, and chroma of 4 to 6. Texture is sandy loam, fine sandy loam, loam, or silt loam in the fine earth fraction. Reaction ranges from extremely acid to moderately acid.

The Cd horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 2 to 4. It is sandy loam, fine sandy loam, loam or silt loam in the fine earth fraction. Reaction is strongly acid to slightly acid.

Formation of the Soils

The first part of this section describes the factors of soil formation and relates them to the formation of soils in the survey area. The second part defines the processes of soil horizon development as they relate to soil formation in Clinton County.

Soils are products of weathering and other physical and chemical processes that act on parent material. The properties of a soil at a given point on the earth depends on the combination of the following factors: the physical and chemical composition of the parent material; climate; plant and animal life; topography; and time. The relative influence of each of these factors differs from place to place, and each modifies the effect of the others. For example, the impact of climate over a given area is tempered by relief or parent material. In many areas, the influence of a single factor is dominant.

Factors of Soil Formation

Parent Material

Parent material is the unconsolidated earthy material in which soils are formed. It influences the physical, chemical, and mineralogical composition of the soils. It also influences the rate at which soil forming processes will proceed.

Most of the soils in Clinton County formed in deposits left as a result of continental glaciation. Glacial till is the most extensive type of parent material. Less extensive are glacial outwash, alluvial deposits, lacustrine, marine and organic deposits.

Soils formed in glacial till have a wide range of characteristics as a result of the heterogeneous nature of till deposits, particularly its rock fragments and soil particles. Some soils such as Grenville and Hogansburg soils formed in very deep glacial till deposits and have a dense substratum. Other soils such as Monadnock and Sunapee soils formed in very deep, coarser textured till and do not have a dense layer. In some places, the glacial till is moderately deep or shallow over bedrock. Tunbridge and Lyman soils, for example, are moderately deep and shallow respectively to gneiss or granitic bedrock. Benson soils are shallow to limestone, calcareous shale, or argillite. Some areas have bedrock exposed at the surface. Rock outcrop is mapped in these areas.

As the glacial ice melted, large quantities of meltwater transported and sorted soil and rock debris. This material is referred to as glacial outwash and was redeposited in layers of sand and gravel on outwash plains and terraces. Adams and Colton are examples of soils formed in this material. These soils are coarse textured.

In more recent times, overflowing streams have deposited alluvial material on the floodplains. This material tends to be variable in texture. Examples of soils formed in this material are Cornish soils which formed in medium textured alluvium and Rumney soils which formed in moderately coarse and coarse textured material.

A huge, water body existed during glacial and post-glacial periods. Streams flowing into this lake (and later a sea) dropped their suspended sediment over hundreds of years to form lacustrine and marine deposits. Adjidaumo and Muskellunge are examples of soils developed from this material.

Soils formed in organic deposits are mainly in closed depressions in the uplands and along the lake plain near Lake Champlain. Loxley and Bucksport are examples of soils formed in well decomposed organic material.

Topography

The shape of the land surface, the slope, and the position of the land surface as related to the water table have a great influence on the formation of soil. Soils that formed in convex sloping positions where little runoff accumulates are generally well drained and have a bright, unmottled subsoil. Examples of soils in this category are Madrid and Grenville. In level or slightly concave areas, the seasonal high water table is usually closer to the surface for extended periods. This results in gray mottling (redox depletions or other redoximorphic features) close to the surface and commonly a thick, dark surface layer resulting from higher organic matter.

Some soils are wet because they occupy a position where water accumulates and is perched above a restricting layer in the soil. Pinconning soils are an example.

Most local differences in soils are primarily the result of differences in parent material and topography. The table on “relationships between parent material, landscape position, and drainage” provides more information on topographic associations with soil series.

Climate

Climate, particularly temperature and precipitation, is one of the most influential of the soil forming factors. It determines to a large degree the kind of weathering processes that occur. It also affects the growth and kind of vegetation and the leaching and translocation of weathered material.

Most of Clinton County has a humid, temperate climate which tends to promote the development of moderately weathered, leached soils. In general, soil temperature is affected by elevation from east to west as well as proximity to Lake Champlain. During 1987 to 1989, soil scientists from Cornell University and the Natural Resources Conservation Service collected data from thermocouples at 18 sites between the elevations of 110 and 2,040 feet above sea level. This data, along with temperature readings of selected well water sites, provided a basis for separating the mesic-frigid boundary. To the south, this separation has been established at approximately 450 feet above sea level. Near Plattsburgh, this separation tapers toward Lake Champlain ending at Point Au Roche. Cryic soils have been established for mountainous areas above 3,000 feet elevation based on a regional Adirondack legend and temperature studies.

More specific data is in the climate section under “General Nature of the Survey Area”.

Plant and Animal Life

All living organisms, including plants, animals, bacteria, and fungi, influence soil formation. Vegetation is generally responsible for the amount of organic matter and nutrients in the soil and for the color and structure of the surface layer. Earthworms and other burrowing animals help to keep the soil porous and permeable to air and water. Animal waste products aggregate soil particles and improve soil structure. Bacteria and fungi decompose vegetation which releases nutrients for plant use.

Clinton County was originally under native forest consisting of coniferous and northern hardwood species. The loss of nutrients through leaching is slow under hardwoods because they take up large quantities of bases (nutrients) and return much of them to the soil surface each year as leaf litter. Conifers, such as balsam fir and red

spruce, do not use large amounts of nutrients. Therefore, the soil becomes more acid and leaching is more rapid.

The root zone is shallow in many upland soils making trees susceptible to windthrow. Uprooted trees also cause mixing of soil materials.

Human activities like cultivation have influenced changes in soil properties. Addition of nutrients through fertilizers, mixing soil horizons with plows, and accelerated erosion have affected many soils in Clinton County.

Time

The degree of soil profile development is also affected by time. In geological terms, the parent material in which soils formed in Clinton County is relatively young. Most of the deposits were left by the last glacier, 12,000 to 14,000 years ago. All soils have not reached the same stage of soil profile development. Soil-forming factors other than age of deposits influence these processes. Hogansburg soils appear to be younger than Skerry soils. However, a difference in parent material has caused much of the difference in appearance.

An immature soil is one that has not had enough time to develop distinct horizons. Lovewell and Cornish soils, for example, were formed in alluvial sediments. They formed on flood plains receiving periodic deposition of soil material from streams interrupting soil development.

Processes of Soil Formation

The soil-forming factors and subsequent processes of soil formation result in the development of different layers, or soil horizons. These soil horizons can be viewed in a vertical cut called a soil profile. The soil profile extends from the surface downward into material that soil-forming processes have altered very little. Most soils contain three major horizons: the A, the B, and the C horizons.

Several processes cause the formation of soil horizons. They include accumulation of organic matter, leaching of soluble salts and minerals, translocation of clay minerals, reduction and transfer of iron, and formation of dense layers in the subsoil (Simonson, 1959).

Organic matter accumulates as plant residue decomposes. This process darkens the surface layer and helps to form the O horizon. It takes a long time to replace this organic matter once it has been lost. The organic matter content of the surface layer of soils in Clinton County averages about 4 percent.

For soils to develop a distinct subsoil, some of the lime and other soluble salts must be leached before other soil processes such as translocation of clay minerals can take place. Factors that affect leaching include the kinds of salts originally present, the rate and depth of percolation, type of native vegetation, and the soil texture.

One of the more important processes of soil horizon development in some soils is the translocation of silicate clay minerals. The parent material determines the content of clay minerals in the soil; however, clay content varies from one soil horizon to another. Clay particles are transported (eluviated) downward from the A horizon and redeposited (illuviated) in the B horizon as clay films on ped faces, as linings along pores and root channels, and as coatings on some rock fragments. In some soils, an E horizon has formed by considerable eluviation of clay minerals to the B horizon. The Bombay soil is an example of a soil where the clay content is higher in the B horizon than in the A horizon because of translocation.

The reduction and transfer of iron compounds occur mainly in the wetter, more poorly drained soils. This process is known as gleying. In poorly drained and very poorly drained soils, such as Runeberg soils, the grayish subsoil indicates the reduction, removal and transfer of iron. In moderately well drained and somewhat

poorly drained soils, such as Hogansburg and Malone soils, yellowish brown and reddish brown mottles indicate the segregation of iron compounds. In these soils, oxidation takes place along with some reduction.

Many soils in Clinton County have a spodic horizon in the subsoil that is commonly below an E horizon. The spodic horizon is evidence of transported (illuviated) amorphous materials composed of organic matter and aluminum, with or without iron. It is generally dark reddish brown or reddish brown and has a texture of fine sandy loam or sandier. Soils with spodic horizons occur throughout the soil survey area; but, they are most prevalent in the Adirondack Mountains and foothills. Becket and Colton soils are examples of soils with spodic horizons. In a few scattered areas of Clinton County, the soils have a spodic horizon that is cemented by amorphous material in approximately 90 percent of its volume. An example is the Wallace soil. Also, in some areas of the Adirondack Mountains, spodic horizons tend to be thicker than 16 inches at sites with an elevation of 2,000 feet or more above sea level. Cold soil temperatures and coniferous vegetation appear to be the main reasons for these very thick spodic horizons. Rawsonville soil is an example.

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Glossary

Ablation till. Loose, permeable till deposited during the final downwasting of glacial ice. Lenses of crudely sorted sand and gravel are common.
Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.
Alluvial fan. The fanlike deposit of a stream where it issues from a gorge upon a plain or of a tributary stream near or at its junction with its main stream.
Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.
Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.
Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.
Area reclaim (in tables). An area difficult to reclaim after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.
Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.
Aspect. The direction in which a slope faces.
Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 40-inch profile or to a limiting layer is expressed as:

Very low 0 to 2.4
Low 2.4 to 3.2
Moderate 3.2 to 5.2
High more than 5.2

Back slope. The geomorphic component that forms the steepest inclined surface and principal element of many hillsides. Back slopes in profile are commonly steep, are linear, and may or may not include cliff segments.
Basal till. Compact glacial till deposited beneath the ice.
Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.
Bedding planes. Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.
Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.
Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.
Bottom land. The normal flood plain of a stream, subject to flooding.
Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.
Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.
Brush management. Use of mechanical, chemical, or biological methods to make

conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or "chain," of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that is 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

Colluvium. Soil material or rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Compressible (in tables). Excessive decrease in volume of soft soil under load.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations

that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Corrosion. Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Crystalline bedrock A type of hard, massive bedrock that formed under heat and/or pressure without further classification.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Delta. A body of alluvium having a surface that is nearly flat and fan shaped; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Depth to rock (in tables). Bedrock is too near the surface for the specified use.

Diamicton A non-genetic term for a non-sorted or poorly sorted sediment that contains a wide range of particle sizes (geology) (19).

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming. A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less

protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the “Soil Survey Manual.”

Drainage, surface. Runoff, or surface flow of water, from an area.

Drumlin. A low, smooth, elongated oval hill, mound, or ridge of compact glacial till. The longer axis is parallel to the path of the glacier and commonly has a blunt nose pointing in the direction from which the ice approached.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Ecotone. Transition between two or more diverse communities as, for example between forest and grassland.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian soil material. Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Synonym: scarp.

Esker. A narrow, winding ridge of stratified gravelly and sandy drift deposited by a stream flowing in a tunnel beneath a glacier.

Excess fines (in tables). Excess silt and clay in the soil. The soil does not provide a source of gravel or sand for construction purposes.

Excess lime (in tables). Excess carbonates in the soil that restrict the growth of some plants.

Extrusive rock. Igneous rock derived from deep-seated molten matter (magma) emplaced on the earth’s surface.

Fast intake (in tables). The rapid movement of water into the soil.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate

amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

Flaggy soil material. Material that is, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

Fluvial. Of or pertaining to rivers; produced by river action, as a fluvial plain.

Foot slope. The inclined surface at the base of a hill.

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragile (in tables). A soil that is easily damaged by use or disturbance.

Frost action (in tables). Freezing and thawing of soil moisture. Frost action can damage roads, buildings and other structures, and plant roots.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Glacial drift. Pulverized and other rock material transported by glacial ice and then deposited. Also, the sorted and unsorted material deposited by streams flowing from glaciers.

Glacial outwash. Gravel, sand, and silt, commonly stratified, deposited by glacial meltwater.

Glacial till. Unsorted, nonstratified glacial drift consisting of clay, silt, sand, and boulders transported and deposited by glacial ice.

Glaciofluvial deposits. Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur as kames, eskers, deltas, and outwash plains.

Glaciolacustrine deposits. Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are interbedded or laminated.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that is 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral,

commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock. Rock formed by solidification from a molten or partially molten state. Major varieties include plutonic and volcanic rock. Examples are andesite, basalt, and granite.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Irrigation. Application of water to soils to assist in production of crops.

Kame. An irregular, short ridge or hill of stratified glacial drift.

Knoll. A small, low, rounded hill rising above adjacent landforms.

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Low strength. The soil is not strong enough to support loads.

Marine deposit. Material deposited in a sea or brackish-water environment, and exposed when the water level is lowered or the elevation of the land is raised.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses

consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement. Nearly all such rocks are crystalline.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Moraine. An accumulation of earth, stones, and other debris deposited by a glacier. Some types are terminal, lateral, medial, and ground.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Mottles (noted in map unit descriptions) are associated with saturated or near-saturated conditions, as in poorly drained soils. These same mottles are described more precisely in the respective series descriptions as redoximorphic features, in the form of depletions or concentrations. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Mountain. A natural elevation of the land surface, rising more than 1,000 feet above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range.

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Mudstone. Sedimentary rock formed by induration of silt and clay in approximately equal amounts.

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron,

manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Outwash plain. A landform of mainly sandy or coarse textured material of glaciofluvial origin. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedon. The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The downward movement of water through the soil.

Percs slowly (in tables). The slow movement of water through the soil adversely affects the specified use.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as “saturated hydraulic conductivity,” which is defined in the “Soil Survey Manual.” In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as “permeability.” Terms describing permeability, measured in inches per hour, are as follows:

Very slow	less than 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are

artificially drained, the water can be removed only by percolation or evapotranspiration.

Poor filter (in tables). Because of rapid or very rapid permeability, the soil may not adequately filter effluent from a waste disposal system.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Poor outlets (in tables). Refers to areas where surface or subsurface drainage outlets are difficult or expensive to install.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Extremely acid less than 4.4
Very strongly acid 4.5 to 5.0
Strongly acid 5.1 to 5.5
Moderately acid 5.6 to 6.0
Slightly acid 6.1 to 6.5
Neutral 6.6 to 7.3
Slightly alkaline 7.4 to 7.8
Moderately alkaline 7.9 to 8.4
Strongly alkaline 8.5 to 9.0
Very strongly alkaline 9.1 and higher

Reclamation. The process of reconverting disturbed lands to their former uses or other productive uses.

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha, alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Regolith. The unconsolidated mantle of weathered rock and soil material on the earth’s surface; the loose earth material above the solid rock.

Relief. The elevations or inequalities of a land surface, considered collectively.

Rill. A steep-sided channel resulting from accelerated erosion. A rill generally is a few inches deep and not wide enough to be an obstacle to farm machinery.

Riprap. Riprap is a permanent cover of rocks used to stabilize streambanks.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots. This zone, as defined in the map unit description, is the average depth that cultivated plant roots occupy during the growing season. Some soils have root zones that are limited by a restrictive layer. In poorly drained soils, excess moisture in the spring retards early root growth. Excessively drained soils may limit roots by lack of moisture in the summer.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Seasonal high water table. A zone of saturation at the highest average depth during the wettest season. It is at least six inches thick, persists in the soil for more than a few weeks, and is within six feet of the soil surface. . The depth to the seasonal high water table implies the degree of wetness in the soil.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Seepage (in tables). The movement of water through the soil. Seepage adversely affects the specified use.

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock formed by the hardening of a clay deposit.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole. A depression in the landscape where limestone has been dissolved.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

Slippage (in tables). Soil mass susceptible to movement downslope when loaded, excavated, or wet.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Nearly level............................3 percent and less
Gently sloping ....3 to 8 percent
Strongly sloping ....8 to 15 percent
Moderately steep...................15 to 25 percent
Steep ....25 to 35 percent
Very steep .... 35 percent and higher

Slope (in tables). Slope is great enough that special practices are required to ensure satisfactory performance of the soil for a specific use.

Slow intake (in tables). The slow movement of water into the soil.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Small stones (in tables). Rock fragments less than 3 inches (7.6 centimeters) in diameter. Small stones adversely affect the specified use of the soil.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand ....2.0 to 1.0
Coarse sand ....1.0 to 0.5
Medium sand ....0.5 to 0.25
Fine sand ....0.25 to 0.10
Very fine sand...................................0.10 to 0.05
Silt ....0.05 to 0.002
Clay less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Spodic horizon. A dark reddish brown or reddish brown soil layer with fine sandy

loam or coarser texture. This layer is a result of illuviated organic matter and aluminum, with or without iron.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Technically, the E horizon. Generally refers to a leached horizon lighter in color and lower in content of organic matter than the overlying surface layer.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the "plow layer," or the "Ap horizon."

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Swale. One of the lowest parts of the landscape where soils tend to be poorly drained.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrane. A formation or group of formations; the area or surface over which a particular rock or group of rocks is prevalent. An area or region considered in relation to its fitness or suitability for some specific purpose.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."

Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.

Till plain. An extensive area of nearly level to undulating soils underlain by glacial till.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toe slope. The outermost inclined surface at the base of a hill; part of a foot slope.

Topsoil. The upper part of the soil, which is the most favorable material for plant

growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Unstable fill (in tables). Risk of caving or sloughing on banks of fill material.

Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Varve. A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier. The fine-grained, dark-colored, winter layer accompanies a coarser, light-colored summer layer.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Water-worked (wave-worked) deposits. Material remaining from an ancient shoreline of a lake or sea. Much of the clay and silt particles have been washed out by wave movement leaving behind mostly sand, gravel or cobbles.

Weathering. All physical and chemical changes produced in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Table 1.—Temperature and Precipitation

(Recorded in the period 1961-90 at Dannemora, New York)

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average daily	2 years in 10 will have-- Maximum temperature higher than--	2 years in 10 will have-- Minimum temperature lower than--	Average number of growing degree days*	Average	2 years in 10 will have-- Less than--	2 years in 10 will have-- More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January-----	26.1	7.4	16.8	51	-21	1	1.91	0.92	2.76	5	13.1
February----	28.5	9.5	19.0	53	-18	3	1.95	1.04	2.75	5	17.2
March-------	39.1	20.4	29.7	69	-8	34	2.18	1.20	3.05	6	14.1
April-------	52.2	32.7	42.4	80	11	148	2.69	1.87	3.45	6	5.1
May---------	66.1	44.1	55.1	88	26	468	3.01	1.66	4.21	7	0.2
June--------	74.8	53.1	64.0	90	36	717	3.38	2.34	4.35	8	0.0
July--------	79.3	58.2	68.7	93	44	887	3.45	2.19	4.60	7	0.0
August------	76.5	56.0	66.2	90	40	812	4.28	2.98	5.47	8	0.0
September---	68.4	47.8	58.1	87	30	541	3.34	1.94	4.59	6	0.0
October-----	57.0	37.9	47.4	79	19	261	3.00	1.78	4.09	7	0.6
November----	42.5	27.6	35.1	67	6	55	3.29	1.95	4.49	8	6.5
December----	30.0	13.4	21.7	54	-16	6	2.82	1.47	4.00	7	19.2
Yearly:											
Average---	53.4	34.0	43.7	---	---	---	---	---	---	---	---
Extreme---	98	-34	---	94	-24	---	---	---	---	---	---
Total-----	---	---	---	---	---	3,934	35.31	30.21	40.09	80	76.0

Average number of days per year with at least 1 inch of snow on the ground: 8

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (40 degrees F).

Table 2.—Freeze Dates in Spring and Fall

(Recorded in the period 1961-90 at Dannemora, New York)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	May 1	May 9	May 27
2 years in 10 later than--	April 27	May 4	May 21
5 years in 10 later than--	April 18	April 25	May 10
First freezing temperature in fall:			
1 year in 10 earlier than--	Oct. 10	Sept. 28	Sept. 22
2 years in 10 earlier than--	Oct. 16	Oct. 4	Sept. 26
5 years in 10 earlier than--	Nov. 27	Oct. 15	Oct. 3

Table 3.—Growing Season

(Recorded in the period 1961-90 at Dannemora, New York)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	Days	Days
9 years in 10	167	148	124
8 years in 10	175	156	131
5 years in 10	190	171	145
2 years in 10	206	186	159
1 year in 10	214	194	166

Table 4.—Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
15	Loxley-Beseman complex	781	0.1
17	Beseman-Rumney-Loxley complex	2,640	0.4
367	Searsport-Borosaprists-Naumburg complex	344	*
375C	Colton-Adams complex, 3 to 15 percent slopes	1,410	0.2
375F	Colton-Adams complex, 35 to 70 percent slopes	111	*
651C	Monadnock-Tunbridge-Sabattis complex, rolling, very bouldery	2,214	0.3
651D	Monadnock-Tunbridge complex, hilly, very bouldery	1,444	0.2
653C	Monadnock fine sandy loam, 3 to 15 percent slopes, very bouldery	3,026	0.4
654C	Monadnock-Sabattis complex, rolling, very bouldery	1,395	0.2
655B	Sunapee-Monadnock complex, 3 to 15 percent slopes, very bouldery	8,439	1.2
661C	Hermon fine sandy loam, 3 to 15 percent slopes, very bouldery	520	*
661D	Hermon fine sandy loam, 15 to 35 percent slopes, very bouldery	330	*
708B	Adirondack-Sabattis-Tughill complex, 0 to 8 percent slopes, very bouldery	11,181	1.6
721C	Becket-Tunbridge-Skerry complex, 3 to 15 percent slopes, very bouldery	8,868	1.2
721D	Becket-Tunbridge complex, 15 to 35 percent slopes, very bouldery	11,350	1.6
723C	Becket fine sandy loam, 3 to 15 percent slopes, very bouldery	4,309	0.6
723D	Becket fine sandy loam, 15 to 35 percent slopes, very bouldery	1,427	0.2
725B	Skerry-Becket complex, 3 to 15 percent slopes, very bouldery	10,782	1.5
727B	Skerry-Adirondack complex, 0 to 8 percent slopes, very bouldery	6,058	0.8
831C	Tunbridge-Lyman complex, 3 to 15 percent slopes, very rocky	1,595	0.2
831D	Tunbridge-Lyman complex, 15 to 35 percent slopes, very rocky	5,754	0.8
831F	Tunbridge-Lyman complex, 35 to 60 percent slopes, very rocky	1,370	0.2
861F	Lyman-Ricker complex, 35 to 60 percent slopes, very rocky	2,641	0.4
931C	Mundalite-Rawsonville-Worden complex, 3 to 15 percent slopes, very bouldery	1,593	0.2
931D	Mundalite-Rawsonville complex, 15 to 35 percent slopes, very bouldery	5,194	0.7
933C	Mundalite-Worden complex, 3 to 15 percent slopes, very bouldery	1,439	0.2
941C	Rawsonville-Hogback complex, 3 to 15 percent slopes, very rocky	565	*
941D	Rawsonville-Hogback complex, 15 to 35 percent slopes, very rocky	5,388	0.8
941F	Rawsonville-Hogback complex, 35 to 60 percent slopes, very rocky	3,223	0.5
943C	Rawsonville-Borosaprists-Ricker complex, 0 to 25 percent slopes, very rocky	1,070	0.1
945F	Hogback-Ricker complex, 35 to 60 percent slopes, very rocky	3,173	0.4
949F	Rock outcrop-Ricker-Hogback complex, 35 to 60 percent slopes, very bouldery	2,442	0.3
991D	Glebe-Skylight complex, 15 to 35 percent slopes, very rocky	937	0.1
997F	Ricker-Skylight-Rock outcrop complex, 35 to 70 percent slopes, very bouldery	2,026	0.3
AbA	Adams loamy sand, 0 to 3 percent slopes	2,408	0.3
AbB	Adams loamy sand, 3 to 8 percent slopes	5,931	0.8
AbC	Adams loamy sand, 8 to 15 percent slopes	4,291	0.6
AbD	Adams loamy sand, 15 to 25 percent slopes	1,310	0.2
AgB	Adirondack loam, 3 to 8 percent slopes	1,211	0.2
AhB	Adirondack loam, gently sloping, very bouldery	14,840	2.1
Ak	Adjidaumo silty clay	5,325	0.7
Am	Adjidaumo mucky silty clay	3,032	0.4
AtA	Amenia fine sandy loam, 0 to 3 percent slopes	591	*
AtB	Amenia fine sandy loam, 3 to 8 percent slopes	777	0.1
AwA	Appleton loam, 0 to 3 percent slopes	2,605	0.4
AwB	Appleton loam, 3 to 8 percent slopes	2,257	0.3
BcB	Becket fine sandy loam, 3 to 8 percent slopes	1,187	0.2
BeC	Becket fine sandy loam, strongly sloping, very bouldery	8,643	1.2
BeD	Becket fine sandy loam, moderately steep, very bouldery	2,818	0.4
BgC	Becket-Tunbridge complex, strongly sloping, very rocky	4,953	0.7
BgE	Becket-Tunbridge complex, steep, very rocky	4,991	0.7
BhC	Benson loam, strongly sloping, very rocky	1,159	0.2
BhE	Benson loam, steep, very rocky	176	*
Bo	Beseman mucky peat	1,235	0.2
BrB	Bice fine sandy loam, 3 to 8 percent slopes	3,940	0.6
BrC	Bice fine sandy loam, 8 to 15 percent slopes	1,660	0.2
BsC	Bice fine sandy loam, strongly sloping, very stony	5,245	0.7

See footnote at end of table.

Table 4.—Acreage and Proportionate Extent of the Soils—Continued

Map symbol	Soil name	Acres	Percent
BvB	Bombay loam, 3 to 8 percent slopes	4,406	0.6
Bx	Bucksport mucky peat	3,452	0.5
CgA	Champlain fine sand, 0 to 3 percent slopes	2,830	0.4
CgB	Champlain fine sand, 3 to 8 percent slopes	6,300	0.9
CgC	Champlain fine sand, 8 to 15 percent slopes	1,266	0.2
ChF	Champlain and Adams soils, very steep	2,654	0.4
Ck	Churubusco muck	798	0.1
ClC	Colosse-Hermon complex, strongly sloping, very stony	1,482	0.2
CmB	Colosse-Trout River complex, gently sloping	4,859	0.7
CmC	Colosse-Trout River complex, strongly sloping	282	*
CnC	Colosse-Trout River complex, strongly sloping, very stony	9,405	1.3
CnD	Colosse-Trout River complex, moderately steep, very stony	299	*
CoA	Colton gravelly loamy coarse sand, 0 to 3 percent slopes	837	0.1
CoB	Colton gravelly loamy coarse sand, 3 to 8 percent slopes	2,313	0.3
CoC	Colton gravelly loamy coarse sand, 8 to 15 percent slopes	1,659	0.2
CpC	Colton gravelly loamy coarse sand, strongly sloping, very stony	5,620	0.8
CpE	Colton gravelly loamy coarse sand, steep, very stony	2,398	0.3
Crk	Cook mucky loamy fine sand	5,730	0.8
Crr	Cornish silt loam	2,034	0.3
Cs	Covert loamy sand	1,709	0.2
CtsA	Covertfalls loamy fine sand, 0 to 3 percent slopes	619	*
CtsB	Covertfalls loamy fine sand, 3 to 8 percent slopes	736	0.1
CttB	Covertfalls gravelly loamy fine sand, 3 to 8 percent slopes	695	*
CvA	Coveytown loamy sand, 0 to 3 percent slopes	6,137	0.9
CvB	Coveytown loamy sand, 3 to 8 percent slopes	2,081	0.3
CwB	Coveytown loamy sand, gently sloping, very stony	8,502	1.2
CxA	Croghan loamy fine sand, 0 to 3 percent slopes	2,322	0.3
CxB	Croghan loamy fine sand, 3 to 8 percent slopes	2,309	0.3
DeA	Deerfield fine sand, 0 to 3 percent slopes	932	0.1
DeB	Deerfield fine sand, 3 to 8 percent slopes	546	*
Df	Deinache fine sand	3,988	0.6
FeB	Fahey gravelly fine sandy loam, 3 to 8 percent slopes, loamy substratum	6,973	1.0
FhB	Fahey gravelly fine sandy loam, gently sloping, very stony	1,824	0.3
FkB	Fernlake cobbly loamy sand, 3 to 8 percent slopes	853	0.1
FlB	Fernlake cobbly loamy sand, gently sloping, very bouldery	2,429	0.3
FlC	Fernlake cobbly loamy sand, strongly sloping, very bouldery	4,650	0.7
FlD	Fernlake cobbly loamy sand, moderately steep, very bouldery	594	*
FlF	Fernlake cobbly loamy sand, very steep, very bouldery	592	*
FmB	Flackville loamy fine sand, 3 to 8 percent slopes	570	*
Fn	Fluvaquents - Udifluvents complex, frequently flooded	5,017	0.7
GfC	Gardenisle-Benson complex, strongly sloping, rocky	1,933	0.3
Gl	Gougeville mucky loamy fine sand	671	*
GrA	Grattan loamy sand, 0 to 3 percent slopes	2,158	0.3
GrB	Grattan loamy sand, 3 to 8 percent slopes	1,664	0.2
GvB	Grenville loam, 3 to 8 percent slopes	623	*
GwC	Grenville loam, strongly sloping, very stony	1,648	0.2
Ha	Hailesboro silt loam	3,210	0.4
HeB	Hermon fine sandy loam, 3 to 8 percent slopes	691	*
HeC	Hermon fine sandy loam, 8 to 15 percent slopes	715	0.1
HfC	Hermon fine sandy loam, strongly sloping, very bouldery	4,507	0.6
HfD	Hermon fine sandy loam, moderately steep, very bouldery	1,256	0.2
HgC	Hermon-Adirondack complex, strongly sloping, very bouldery	1,650	0.2
HlB	Heuvelton silty clay loam, 3 to 8 percent slopes	496	*
HlD	Heuvelton silty clay loam, 15 to 25 percent slopes	362	*
HoA	Hogansburg loam, 0 to 3 percent slopes	2,123	0.3
HoB	Hogansburg loam, 3 to 8 percent slopes	7,292	1.0
HrB	Hogansburg loam, gently sloping, very stony	2,597	0.4
InB	Irona-Conic complex, gently sloping, very rocky	18,232	2.6
Jn	Junius fine sand	1,977	0.3
KhB	Kalurah fine sandy loam, 3 to 8 percent slopes	1,043	0.1
KlB	Kalurah fine sandy loam, gently sloping, very stony	2,343	0.3
Kr	Kingsbury-Rhinebeck complex	1,328	0.2

See footnote at end of table.

Table 4.—Acreage and Proportionate Extent of the Soils—Continued

Map symbol	Soil name	Acres	Percent
Ld	Lovewell very fine sandy loam, stratified substratum	1,206	0.2
Le	Loxley mucky peat	748	0.1
LtF	Lyman-Tunbridge-Rock outcrop complex, very steep	2,372	0.3
Lv	Lyonmounten loam	688	*
Ly	Lyonmounten loam, very stony	7,357	1.0
MaB	Madrid fine sandy loam, 3 to 8 percent slopes	212	*
MaC	Madrid fine sandy loam, 8 to 15 percent slopes	408	*
MeA	Malone gravelly loam, 0 to 3 percent slopes	8,482	1.2
MeB	Malone gravelly loam, 3 to 8 percent slopes	3,505	0.5
MfB	Malone gravelly loam, gently sloping, very stony	8,326	1.2
Mk	Markey muck	1,507	0.2
Mn	Massena fine sandy loam	1,242	0.2
Mp	Medomak silt loam, stratified substratum	1,237	0.2
Ms	Mino loam	1,069	0.1
MtB	Monadnock fine sandy loam, 3 to 8 percent slopes	2,026	0.3
MtC	Monadnock fine sandy loam, 8 to 15 percent slopes	1,246	0.2
MuC	Monadnock fine sandy loam, strongly sloping, very bouldery	17,266	2.4
MuD	Monadnock fine sandy loam, moderately steep, very bouldery	4,140	0.6
MuF	Monadnock fine sandy loam, very steep, very bouldery	1,134	0.2
MvA	Mooers loamy sand, 0 to 3 percent slopes	507	*
MvB	Mooers loamy sand, 3 to 8 percent slopes	494	*
MwA	Muskellunge silty clay loam, 0 to 3 percent slopes	9,597	1.3
MwB	Muskellunge silty clay loam, 3 to 8 percent slopes	552	*
NeC	Neckrock-Summerville complex, strongly sloping, very rocky	4,802	0.7
NoB	Nicholville very fine sandy loam, 3 to 8 percent slopes	678	*
NrA	Northway loamy fine sand, 0 to 3 percent slopes	2,035	0.3
NrB	Northway loamy fine sand, 3 to 8 percent slopes	400	*
OcA	Occur loamy sand, 0 to 3 percent slopes	626	*
OcB	Occur loamy sand, 3 to 8 percent slopes	2,165	0.3
OgB	Ogdensburg silt loam, 0 to 8 percent slopes	859	0.1
PeA	Peasleeville loam, 0 to 3 percent slopes	4,654	0.7
PeB	Peasleeville loam, 3 to 8 percent slopes	3,912	0.5
PfB	Peasleeville loam, gently sloping, very stony	17,970	2.5
Pg	Pinconning mucky loamy fine sand	1,336	0.2
Ph	Pipestone fine sand	1,941	0.3
Pn	Pits, gravel	1,289	0.2
Po	Pits, quarry	129	*
Pp	Pits, sand	686	*
PtA	Plainfield loamy sand, 0 to 3 percent slopes	4,453	0.6
PtB	Plainfield loamy sand, 3 to 8 percent slopes	3,324	0.5
PtC	Plainfield loamy sand, 8 to 15 percent slopes	483	*
PvF	Plainfield and Grattan soils, very steep	583	*
RoB	Rock outcrop-Ricker complex, gently sloping	8,385	1.2
Rr	Roundabout silt loam	1,290	0.2
Ry	Runeberg mucky loam	5,003	0.7
Sb	Sabattis mucky fine sandy loam, very bouldery	4,756	0.7
Se	Saprists and Aquents, ponded	6,211	0.9
ShB	Schroon fine sandy loam, 3 to 8 percent slopes	23,678	3.3
ShC	Schroon fine sandy loam, 8 to 15 percent slopes	1,063	0.1
SkB	Schroon fine sandy loam, gently sloping, very stony	17,006	2.4
Sn	Sciota fine sand	2,237	0.3
So	Shaker loam	982	0.1
SpB	Sheddenbrook gravelly loamy fine sand, 3 to 8 percent slopes	1,213	0.2
SrB	Skerry fine sandy loam, 3 to 8 percent slopes	2,941	0.4
SsB	Skerry fine sandy loam, gently sloping, very bouldery	14,743	2.1
SsC	Skerry fine sandy loam, strongly sloping, very bouldery	2,255	0.3
StD	Success cobbly sandy loam, moderately steep, very bouldery	1,121	0.2
SwB	Sunapee fine sandy loam, 3 to 8 percent slopes	5,830	0.8
SxB	Sunapee fine sandy loam, gently sloping, very bouldery	20,412	2.9
Sz	Swanton very fine sandy loam	3,454	0.5
TcB	Topknot-Chazy complex, gently sloping, rocky	13,685	1.9

See footnote at end of table.

Table 4.—Acreage and Proportionate Extent of the Soils—Continued

Map symbol	Soil name	Acres	Percent
TnC	Tunbridge-Lyman complex, strongly sloping, very rocky	3,351	0.5
TnE	Tunbridge-Lyman complex, steep, very rocky	4,672	0.7
Ud	Udipsamments and Psammaquents, smoothed	907	0.1
Ue	Udipsamments, mine spoil, non-acid	270	*
Uf	Udorthents, refuse substratum	224	*
Ug	Udorthents, smoothed	2,549	0.4
Uh	Udorthents, wet substratum	1,531	0.2
Un	Urban land	1,097	0.2
UpA	Urban land-Plainfield complex, nearly level	827	0.1
UpB	Urban land-Plainfield complex, gently sloping	300	*
W	Water	50,963	7.1
WdB	Waddington gravelly loam, 3 to 8 percent slopes	1,088	0.2
Wn	Wainola loamy fine sand	4,557	0.6
WsB	Wallace fine sand, 3 to 8 percent slopes	438	*
WsC	Wallace fine sand, 8 to 15 percent slopes	210	*
WsE	Wallace fine sand, 25 to 35 percent slopes	368	*
Wu	Wonsqueak muck	4,159	0.6
	Total	708,267	99.1

* Less than 0.1 percent.

Table 5.—Prime Farmland

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name.)

Map symbol	Soil name
AtA	Amenia fine sandy loam, 0 to 3 percent slopes
AtB	Amenia fine sandy loam, 3 to 8 percent slopes
AwA	Appleton loam, 0 to 3 percent slopes (Prime farmland if drained)
AwB	Appleton loam, 3 to 8 percent slopes (Prime farmland if drained)
BcB	Becket fine sandy loam, 3 to 8 percent slopes
BrB	Bice fine sandy loam, 3 to 8 percent slopes
BvB	Bombay loam, 3 to 8 percent slopes
Crr	Cornish silt loam (Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season)
CtsA	Covertfalls loamy fine sand, 0 to 3 percent slopes
CtsB	Covertfalls loamy fine sand, 3 to 8 percent slopes
CttB	Covertfalls gravelly loamy fine sand, 3 to 8 percent slopes
FmB	Flackville loamy fine sand, 3 to 8 percent slopes
GvB	Grenville loam, 3 to 8 percent slopes
Ha	Hailesboro silt loam (Prime farmland if drained)
HlB	Heuvelton silty clay loam, 3 to 8 percent slopes
HoA	Hogansburg loam, 0 to 3 percent slopes
HoB	Hogansburg loam, 3 to 8 percent slopes
KhB	Kalurah fine sandy loam, 3 to 8 percent slopes
Ld	Lovewell very fine sandy loam, stratified substratum
MaB	Madrid fine sandy loam, 3 to 8 percent slopes
MeA	Malone gravelly loam, 0 to 3 percent slopes (Prime farmland if drained)
MeB	Malone gravelly loam, 3 to 8 percent slopes (Prime farmland if drained)
Mn	Massena fine sandy loam (Prime farmland if drained)
Ms	Mino loam (Prime farmland if drained)
MtB	Monadnock fine sandy loam, 3 to 8 percent slopes
MvA	Mooers loamy sand, 0 to 3 percent slopes
MvB	Mooers loamy sand, 3 to 8 percent slopes
MwA	Muskellunge silty clay loam, 0 to 3 percent slopes (Prime farmland if drained)
MwB	Muskellunge silty clay loam, 3 to 8 percent slopes (Prime farmland if drained)
NrA	Northway loamy fine sand, 0 to 3 percent slopes (Prime farmland if drained)
NrB	Northway loamy fine sand, 3 to 8 percent slopes (Prime farmland if drained)
OcA	Occur loamy sand, 0 to 3 percent slopes
OcB	Occur loamy sand, 3 to 8 percent slopes
OgB	Ogdensburg silt loam, 0 to 8 percent slopes (Prime farmland if drained)
PeA	Peasleeville loam, 0 to 3 percent slopes (Prime farmland if drained)
PeB	Peasleeville loam, 3 to 8 percent slopes (Prime farmland if drained)
Rr	Roundabout silt loam (Prime farmland if drained)
ShB	Schroon fine sandy loam, 3 to 8 percent slopes
Sn	Sciota fine sand (Prime farmland if drained)
So	Shaker loam (Prime farmland if drained)
SrB	Skerry fine sandy loam, 3 to 8 percent slopes
SwB	Sunapee fine sandy loam, 3 to 8 percent slopes
Sz	Swanton very fine sandy loam (Prime farmland if drained)
Wn	Wainola loamy fine sand (Prime farmland if drained)

Table 6.—Land Capability and Yields per Acre of Crops and Pasture

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil.)

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture
		Tons	Bu	Tons	Tons	AUM
15:						
Loxley, undrained, high ppt.-------------------	7w	---	---	---	---	---
Beseman, undrained------	7w	---	---	---	---	---
17:						
Beseman, undrained------	7w	---	---	---	---	---
Rumney------------------	4w	---	---	---	2.50	---
Loxley, undrained-------	7w	---	---	---	---	---
367:						
Searsport---------------	5w	---	---	---	---	---
Borosaprists------------	8	---	---	---	---	---
Naumburg----------------	4w	---	---	---	---	---
375C:						
Colton------------------	4e	2.50	---	---	2.00	3.00
Adams-------------------	4e	---	---	12.00	2.50	3.00
375F:						
Colton------------------	7e	---	---	---	---	---
Adams-------------------	7e	---	---	---	---	---
651C:						
Monadnock, very bouldery	6s	---	---	---	---	3.50
Tunbridge, very bouldery	6s	---	---	---	---	3.00
Sabattis, undrained; very bouldery----------	5s	---	---	---	---	2.00
651D:						
Monadnock, very bouldery	7s	---	---	---	---	---
Tunbridge, very bouldery	7s	---	---	---	---	---
653C:						
Monadnock, very bouldery	6s	---	---	---	---	3.50
654C:						
Monadnock, very bouldery	6s	---	---	---	---	3.50
Sabattis, very bouldery-	5s	---	---	---	---	2.00
655B:						
Sunapee, very bouldery--	6s	---	---	---	---	3.50
Monadnock, very bouldery	6s	---	---	---	---	3.50

Table 6.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture
		Tons	Bu	Tons	Tons	AUM
661C:						
Hermon, very bouldery---	6s	---	---	---	---	4.00
661D:						
Hermon, very bouldery---	7s	---	---	---	---	---
708B:						
Adirondack, very bouldery---------------	6s	---	---	---	---	3.00
Sabattis, undrained; very bouldery----------	5s	---	---	---	---	2.00
Tughill, very bouldery--	5s	---	---	---	---	2.00
721C:						
Becket, very bouldery---	6s	---	---	---	---	3.50
Tunbridge, very bouldery	6s	---	---	---	---	3.00
Skerry, very bouldery---	6s	---	---	---	---	---
721D:						
Becket, very bouldery---	7s	---	---	---	---	---
Tunbridge, very bouldery	7s	---	---	---	---	---
723C:						
Becket, very bouldery---	6s	---	---	---	---	3.50
723D:						
Becket, very bouldery---	7s	---	---	---	---	---
725B:						
Skerry, very bouldery---	6s	---	---	---	---	3.50
Becket, very bouldery---	6s	---	---	---	---	3.50
727B:						
Skerry, very bouldery---	6s	---	---	---	---	3.50
Adirondack, very bouldery---------------	6s	---	---	---	---	3.00
831C:						
Tunbridge, very bouldery	6s	---	---	---	---	3.00
Lyman, very bouldery----	6s	---	---	---	---	1.50
831D:						
Tunbridge, very bouldery	7s	---	---	---	---	---
Lyman, very bouldery----	7s	---	---	---	---	---
831F:						
Tunbridge, very bouldery	7s	---	---	---	---	---
Lyman, very bouldery----	7s	---	---	---	---	---
861F:						
Lyman, very bouldery----	7s	---	---	---	---	---

Table 6.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture
		Tons	Bu	Tons	Tons	AUM
861F:						
Ricker, very bouldery---	7s	---	---	---	---	---
931C:						
Mundalite, very bouldery	6s	---	---	---	---	---
Rawsonville, very bouldery---------------	6s	---	---	---	---	---
Worden, very bouldery---	6s	---	---	---	---	---
931D:						
Mundalite, very bouldery	7s	---	---	---	---	---
Rawsonville, very bouldery---------------	7s	---	---	---	---	---
933C:						
Mundalite, very bouldery	6s	---	---	---	---	---
Worden, very bouldery---	6s	---	---	---	---	---
941C:						
Rawsonville, very bouldery---------------	6s	---	---	---	---	---
Hogback, very bouldery--	6s	---	---	---	---	---
941D:						
Rawsonville, very bouldery---------------	7s	---	---	---	---	---
Hogback, very bouldery--	7s	---	---	---	---	---
941F:						
Rawsonville, very bouldery---------------	7s	---	---	---	---	---
Hogback, very bouldery--	7s	---	---	---	---	---
943C:						
Rawsonville, very bouldery---------------	6s	---	---	---	---	---
Borosaprists------------	8	---	---	---	---	---
Ricker, very bouldery---	7s	---	---	---	---	---
945F:						
Hogback, very bouldery--	7s	---	---	---	---	---
Ricker, very bouldery---	7s	---	---	---	---	---
949F:						
Rock outcrop------------	8	---	---	---	---	---
Ricker, very bouldery---	7s	---	---	---	---	---
Hogback, very bouldery--	7s	---	---	---	---	---
991D:						
Glebe, very bouldery----	7s	---	---	---	---	---
Skylight, very bouldery-	7s	---	---	---	---	---

Table 6.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture
		Tons	Bu	Tons	Tons	AUM
997F:						
Ricker, very bouldery---	7s	---	---	---	---	---
Skylight, very bouldery-	7s	---	---	---	---	---
Rock Outcrop------------	8	---	---	---	---	---
AbA:						
Adams-------------------	3s	2.00	---	12.00	2.50	3.00
AbB:						
Adams-------------------	3s	2.00	---	12.00	2.50	3.00
AbC:						
Adams-------------------	4e	2.00	---	---	2.50	3.00
AbD:						
Adams-------------------	6e	---	---	---	---	---
AgB:						
Adirondack--------------	3w	3.00	90.00	14.00	3.00	5.50
AhB:						
Adirondack, very bouldery---------------	6s	---	---	---	---	3.00
Ak:						
Adjidaumo---------------	4w	---	---	15.00	3.00	2.50
Am:						
Adjidaumo, mucky silty clay-------------------	5w	---	---	---	---	2.00
AtA:						
Amenia------------------	2w	5.00	155.00	25.00	4.50	8.50
Unnamed-----------------	---	---	---	---	---	---
AtB:						
Amenia------------------	2e	5.00	155.00	25.00	4.50	8.50
AwA:						
Appleton----------------	3w	3.50	125.00	18.00	4.00	5.50
AwB:						
Appleton----------------	3w	3.50	125.00	18.00	4.00	5.50
BcB:						
Becket------------------	2e	4.00	---	20.00	3.50	6.00
BcC:						
Becket------------------	3e	3.50	---	18.00	3.50	6.00
BeC:						
Becket, very bouldery---	6s	---	---	---	---	3.50
BeD:						
Becket, very bouldery---	7s	---	---	---	---	---
BgC:						
Becket, very bouldery---	6s	---	---	---	---	3.50
Tunbridge, very bouldery	6s	---	---	---	---	3.50

Table 6.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture
		Tons	Bu	Tons	Tons	AUM
BgE:						
Becket, very bouldery---	7s	---	---	---	---	---
Tunbridge, very bouldery	7s	---	---	---	---	---
BhC:						
Benson------------------	6s	---	---	---	2.50	2.50
BhE:						
Benson------------------	7s	---	---	---	---	---
Bo:						
Beseman-----------------	7w	---	---	---	---	---
BrB:						
Bice--------------------	2e	4.50	120.00	20.00	4.00	6.50
BrC:						
Bice--------------------	3e	4.00	110.00	18.00	3.50	6.50
BsC:						
Bice, very stony--------	6s	---	---	---	---	4.00
BsD:						
Bice, very stony--------	7s	---	---	---	---	---
BvB:						
Bombay------------------	2e	5.00	145.00	24.00	4.50	8.50
Bx:						
Bucksport---------------	7w	---	---	---	---	---
CgA:						
Champlain---------------	2s	3.00	---	12.00	2.50	3.00
CgB:						
Champlain---------------	2s	3.00	---	12.00	2.50	3.00
CgC:						
Champlain---------------	3e	2.50	---	12.00	2.50	3.00
ChF:						
Champlain---------------	7e	---	---	---	---	---
Adams-------------------	7e	---	---	---	---	---
Ck:						
Churubusco--------------	7w	---	---	---	---	---
ClC:						
Colosse, very stony-----	6s	---	---	---	---	6.00
Hermon, very stony------	6s	---	---	---	---	4.00
CmB:						
Colosse-----------------	3s	3.50	---	14.00	3.50	6.00
Trout River-------------	3s	2.50	---	12.00	2.00	3.00
CmC:						
Colosse-----------------	4s	3.50	---	14.00	3.00	6.00
Trout River-------------	4s	2.50	---	12.00	2.00	3.00

Table 6.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture
		Tons	Bu	Tons	Tons	AUM
CnC:						
Colosse, very stony-----	6s	---	---	---	---	3.00
Trout River, very stony-	6s	---	---	---	---	2.50
CnD:						
Colosse, very stony-----	6s	---	---	---	---	---
Trout River, very stony-	6s	---	---	---	---	2.50
CoA:						
Colton------------------	3s	2.50	---	12.00	2.00	3.00
CoB:						
Colton------------------	3s	2.50	---	12.00	2.00	3.00
CoC:						
Colton------------------	4e	2.50	---	---	2.00	3.00
CpC:						
Colton, very stony------	6s	---	---	---	---	3.50
CpE:						
Colton, very stony------	7s	---	---	---	---	---
Crk:						
Cook--------------------	4w	---	---	---	---	2.50
Crr:						
Cornish-----------------	3w	3.50	125.00	18.00	3.50	5.50
Cs:						
Covert------------------	2w	3.50	---	14.00	3.00	---
CtsA:						
Covertfalls-------------	2w	3.50	---	14.00	3.00	6.00
CtsB:						
Covertfalls-------------	2w	3.50	---	14.00	3.00	6.00
CttB:						
Covertfalls, gravelly---	2w	3.50	---	14.00	3.00	6.00
CvA:						
Coveytown---------------	3w	3.50	120.00	15.00	3.00	5.50
CvB:						
Coveytown---------------	3w	3.50	120.00	15.00	3.00	5.50
CwB:						
Coveytown, very stony---	6s	---	---	---	---	3.50
CxA:						
Croghan-----------------	2w	3.00	---	14.00	3.00	5.00
CxB:						
Croghan-----------------	2w	3.00	---	14.00	3.00	5.00
DeA:						
Deerfield---------------	2w	3.50	---	15.00	3.00	5.50
DeB:						
Deerfield---------------	2w	3.50	---	15.00	3.00	5.50

Table 6.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture
		Tons	Bu	Tons	Tons	AUM
Df:						
Deinache	4w	---	---	12.00	3.00	4.00
FeB:						
Fahey, loamy substratum	2w	3.00	---	14.00	3.00	5.00
FhB:						
Fahey, very stony	6s	---	---	---	---	4.50
FkB:						
Fernlake	2s	2.00	---	12.00	2.50	3.50
FlB:						
Fernlake, very bouldery	6s	---	---	---	---	3.00
FlC:						
Fernlake, very bouldery	6s	---	---	---	---	3.00
FlD:						
Fernlake, very bouldery	6s	---	---	---	---	3.00
FlF:						
Fernlake, very bouldery	7s	---	---	---	---	---
FmB:						
Flackville	2w	4.00	140.00	18.00	4.00	7.50
Fn:						
Fluvaquents, frequently flooded	5w	---	---	---	---	---
Fluvaquents, frequently flooded	5w	---	---	---	---	3.00
Udifluvents, frequently flooded	5w	---	---	---	---	2.50
GfC:						
Gardenisle	3e	---	100.00	20.00	4.50	5.50
Benson	4e	---	50.00	9.00	2.50	---
Gl:						
Gougeville, undrained	5w	---	---	---	---	2.50
GrA:						
Grattan	3s	---	---	---	---	3.00
GrB:						
Grattan	3s	---	---	---	---	3.00
GvB:						
Grenville	2e	5.50	150.00	25.00	4.50	8.50
GwC:						
Grenville, very stony	6s	---	---	---	---	3.50
Ha:						
Hailesboro	3w	3.50	120.00	18.00	3.50	5.50
HeB:						
Hermon	2s	3.50	---	13.00	3.00	5.50

Table 6.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture
		Tons	Bu	Tons	Tons	AUM
HeC:						
Hermon	3e	3.00	---	12.00	3.00	5.50
HfC:						
Hermon, very bouldery	6s	---	---	---	---	4.00
HfD:						
Hermon, very bouldery	7s	---	---	---	---	---
HgC:						
Hermon, very bouldery	6s	---	---	---	---	---
Adirondack, very bouldery	6s	---	---	---	---	---
HlB:						
Heuvelton	2e	4.50	145.00	24.00	4.00	7.50
HlD:						
Heuvelton	4e	3.50	---	---	3.00	7.00
HoA:						
Hogansburg	2w	4.50	145.00	24.00	4.00	7.50
HoB:						
Hogansburg	2e	4.50	145.00	24.00	4.00	7.50
HrB:						
Hogansburg, very stony	6s	---	---	---	---	3.50
InB:						
Irona	6s	---	---	---	2.50	3.00
Conic	6s	---	---	---	3.00	4.00
Jn:						
Junius	3w	3.50	---	16.00	3.50	5.00
KhB:						
Kalurah	2e	4.00	140.00	22.00	4.00	6.50
KlB:						
Kalurah, very stony	6s	---	---	---	---	3.50
Kr:						
Kingsbury	3w	3.00	125.00	16.00	3.50	5.50
Rhinebeck	3w	3.00	125.00	17.00	3.50	5.50
Ld:						
Lovewell, stratified substratum	2w	4.50	140.00	25.00	4.50	7.50
Le:						
Loxley	7w	---	---	---	---	---
LtF:						
Lyman, very bouldery	7s	---	---	---	---	---
Tunbridge, very bouldery	7s	---	---	---	---	---
Lv:						
Lyonmounten, undrained	4w	---	---	---	---	3.00

Table 6.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture
		Tons	Bu	Tons	Tons	AUM
Ly:						
Lyonmounten, very stony-	6s	---	---	---	---	2.00
MaB:						
Madrid------------------	2e	6.00	150.00	25.00	4.50	8.50
MaC:						
Madrid------------------	3e	6.00	145.00	24.00	4.50	8.50
MeA:						
Malone------------------	3w	3.00	120.00	17.00	3.00	5.50
MeB:						
Malone------------------	3w	3.00	120.00	17.00	3.00	5.50
MfB:						
Malone, very stony------	6s	---	---	---	---	3.50
Mk:						
Markey------------------	6w	---	---	---	---	---
Mn:						
Massena-----------------	3w	3.50	120.00	18.00	3.50	5.50
Mp:						
Medomak, stratified substratum------------	6w	---	---	---	---	2.00
Ms:						
Mino--------------------	3w	3.50	120.00	18.00	3.50	5.50
MtB:						
Monadnock---------------	2e	4.00	---	18.00	4.00	6.00
MtC:						
Monadnock---------------	3e	4.00	---	16.00	3.50	6.00
MuC:						
Monadnock, very bouldery	6s	---	---	---	---	3.50
MuD:						
Monadnock, very bouldery	7s	---	---	---	---	---
MuF:						
Monadnock, very bouldery	7s	---	---	---	---	---
MvA:						
Mooers------------------	2w	3.50	130.00	15.00	3.00	6.00
MvB:						
Mooers------------------	2w	3.50	130.00	15.00	3.00	6.00
MwA:						
Muskellunge-------------	3w	3.00	120.00	17.00	3.50	5.50
MwB:						
Muskellunge-------------	3w	3.00	120.00	17.00	3.50	5.50
NeC:						
Neckrock----------------	6s	---	95.00	19.00	4.00	7.50
Summerville-------------	6s	---	---	---	---	4.00

Table 6.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture
		Tons	Bu	Tons	Tons	AUM
NoB:						
Nicholville-------------	2e	4.50	140.00	20.00	4.00	7.50
NrA:						
Northway----------------	3w	3.50	120.00	15.00	3.50	5.50
NrB:						
Northway----------------	3w	3.50	120.00	15.00	3.50	5.50
OcA:						
Occur-------------------	2w	3.00	---	14.00	3.00	5.00
OcB:						
Occur-------------------	2w	3.00	---	14.00	3.00	5.00
OgB:						
Ogdensburg--------------	3w	3.00	---	15.00	3.00	5.50
PeA:						
Peasleeville------------	3w	3.50	110.00	16.00	3.00	5.50
PeB:						
Peasleeville------------	3w	3.50	110.00	16.00	3.00	5.50
PfB:						
Peasleeville, very stony	6s	---	---	---	---	3.00
Pg:						
Pinconning, undrained---	5w	---	---	14.00	3.00	2.50
Ph:						
Pipestone---------------	3w	3.50	---	14.00	3.00	5.00
Pn:						
Pits, Gravel------------	---	---	---	---	---	---
Po:						
Pits, Quarry------------	---	---	---	---	---	---
Pp:						
Pits, Sand--------------	---	---	---	---	---	---
PtA:						
Plainfield--------------	3s	3.00	---	12.00	3.00	3.50
PtB:						
Plainfield--------------	3s	3.00	---	12.00	3.00	3.50
PtC:						
Plainfield--------------	4e	---	---	---	---	3.00
PvF:						
Plainfield--------------	7e	---	---	---	---	---
Grattan-----------------	7e	---	---	---	---	---
RoB:						
Rock Outcrop------------	8	---	---	---	---	---
Ricker------------------	7s	---	---	---	---	---

Table 6.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture
		Tons	Bu	Tons	Tons	AUM
Rr:						
Roundabout	3w	3.50	120.00	18.00	3.50	5.50
Ry:						
Runeberg	5w	---	---	---	---	2.50
Sb:						
Sabattis, undrained; very bouldery	5s	---	---	---	---	2.00
Se:						
Saprists, ponded	8	---	---	---	---	---
Aquents, ponded	8	---	---	---	---	---
ShB:						
Schroon	2w	4.00	120.00	20.00	4.00	6.50
ShC:						
Schroon	3e	3.50	---	18.00	3.50	6.50
SkB:						
Schroon, very stony	6s	---	---	---	---	3.50
Sn:						
Sciota	3w	3.50	120.00	15.00	3.00	5.50
So:						
Shaker	3w	3.00	120.00	18.00	3.50	5.50
SpB:						
Sheddenbrook	3s	3.00	---	12.00	3.00	5.00
SrB:						
Skerry	2e	3.50	---	18.00	4.00	6.50
SsB:						
Skerry, very bouldery	6s	---	---	---	---	3.50
SsC:						
Skerry, very bouldery	6s	---	---	---	---	3.50
StD:						
Success, very bouldery	6s	---	---	---	---	2.00
SwB:						
Sunapee	2w	3.50	110.00	20.00	4.00	6.50
SxB:						
Sunapee, very bouldery	6s	---	---	---	---	3.50
Sz:						
Swanton	3w	3.00	120.00	18.00	3.00	5.50
TcB:						
Topknot	6s	---	---	---	2.00	2.50
Chazy	6s	---	---	14.00	3.00	3.00
TnC:						
Tunbridge, very bouldery	6s	---	---	---	---	3.00
Lyman, very bouldery	6s	---	---	---	---	2.00

Table 6.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture
		Tons	Bu	Tons	Tons	AUM
TnE:						
Tunbridge, very bouldery	7s	---	---	---	---	---
Lyman, very bouldery----	7s	---	---	---	---	---
Ud:						
Udipsamments, smoothed--	---	---	---	---	---	---
Psammaquents, smoothed--	---	---	---	---	---	---
Ue:						
Udipsamments, Mine Spoil, non-acid--------	---	---	---	---	---	---
Uf:						
Udorthents, Refuse Substratum-------------	---	---	---	---	---	---
Ug:						
Udorthents, smoothed----	---	---	---	---	---	---
Uh:						
Udorthents, wet substratum-------------	---	---	---	---	---	---
Un:						
Urban Land--------------	---	---	---	---	---	---
UpA:						
Urban Land--------------	8	---	---	---	---	---
Plainfield--------------	3s	---	---	---	---	3.00
UpB:						
Urban Land--------------	8	---	---	---	---	---
Plainfield--------------	3s	---	---	---	---	3.00
W:						
Water, areas < 40 acres-	---	---	---	---	---	---
WdB:						
Waddington--------------	3s	4.50	140.00	20.00	4.00	7.00
Wn:						
Wainola, high ppt.------	3w	3.00	---	14.00	3.00	5.50
WsB:						
Wallace-----------------	6s	2.00	---	---	2.50	3.00
WsC:						
Wallace-----------------	6s	---	---	---	---	2.50
WsE:						
Wallace-----------------	7s	---	---	---	---	---
Wu:						
Wonsqueak---------------	7w	---	---	---	---	---
Za:						
Denied Access-----------	---	---	---	---	---	---

Table 7.—Forestland Management and Productivity

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
15:										
Loxley, undrained, high ppt.	2W	Slight	Severe	Severe	Severe	Severe	black spruce	15	29	black spruce
							tamarack	---	---	
							balsam fir	---	---	
Beseman, undrained	3W	Slight	Severe	Severe	Severe	Severe	black spruce	20	29	black spruce, tamarack
							tamarack	35	29	
17:										
Beseman, undrained	3W	Slight	Severe	Severe	Severe	Severe	black spruce	20	29	black spruce, tamarack
							tamarack	35	29	
Rumney	7W	Slight	Severe	Moderate	Severe	Severe	eastern white pine	56	100	eastern arborvitae, eastern white pine, white spruce
							red maple	50	29	
							red spruce	45	100	
Loxley, undrained	---	---	---	---	---	---	black spruce	15	29	black spruce
							tamarack	---	---	
							balsam fir	---	---	
367:										
Searsport	6W	Slight	Severe	Severe	Severe	Severe	eastern white pine	55	86	European larch, eastern arborvitae
							red maple	55	29	
							eastern arborvitae	45	72	
							black spruce	---	---	
							balsam fir	53	100	
							European larch	---	---	
							tamarack	---	---	
Borosaprists	---	---	---	---	---	---	black spruce	20	29	black spruce
							tamarack	---	---	
Naumburg	2W	Slight	Moderate	Severe	Moderate	---	eastern white pine	50	86	balsam fir, eastern white pine, white spruce
							red maple	60	43	
							paper birch	---	---	
							black ash	---	---	
							yellow birch	---	---	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Management concerns: Plant competition	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
									cu ft/ac	
375C:										
Colton	3S	Slight	Slight	Severe	Slight	---	eastern white pine	70	129	balsam fir, eastern white pine, red spruce
							sugar maple	61	43	
							red spruce	45	100	
							red pine	55	86	
							balsam fir	50	114	
							paper birch	40	29	
Adams	3S	Slight	Slight	Severe	Slight	---	eastern white pine	70	129	balsam fir, eastern white pine, red spruce
							red pine	55	86	
							balsam fir	50	114	
375F:										
Colton	3R	Moderate	Severe	Severe	Slight	---	eastern white pine	70	129	balsam fir, eastern white pine, red spruce
							sugar maple	61	43	
							red spruce	45	100	
							red pine	55	86	
							balsam fir	50	114	
							paper birch	40	29	
Adams	3R	Moderate	Severe	Severe	Slight	---	eastern white pine	70	129	balsam fir, eastern white pine, red spruce
							red pine	55	86	
							balsam fir	50	114	
651C:										
Monadnock, very bouldery	8X	Slight	Moderate	Slight	Slight	Moderate	eastern white pine	65	114	eastern white pine, red pine, red spruce
							sugar maple	60	43	
							red pine	60	100	
							white spruce	55	129	
Tunbridge, very bouldery	3A	Slight	Slight	Slight	Moderate	Slight	sugar maple	65	43	balsam fir, eastern white pine, red spruce, sugar maple
							yellow birch	55	29	
							American beech	65	43	
Sabattis, undrained; very bouldery	2W	Slight	Severe	Severe	Severe	Severe	red maple	55	29	balsam fir, red spruce, white spruce
							yellow birch	55	29	
							balsam fir	45	86	
							red spruce	35	72	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordi-nation symbol	Management concerns: Erosion hazard	Equip-ment limita-tion	Seedling mortal-ity	Wind-throw hazard	Plant competi-tion	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
651D:										
Monadnock, very bouldery	8X	Moderate	Severe	Slight	Slight	Moderate	eastern white pine--	65	114	eastern white pine, red pine, red spruce
							sugar maple---------	60	43	
							red pine------------	60	100	
							white spruce--------	55	129	
Tunbridge, very bouldery	3R	Moderate	Moderate	Slight	Moderate	Slight	sugar maple---------	65	43	balsam fir, eastern white pine, red spruce, sugar maple
							yellow birch--------	55	29	
							American beech------	65	43	
653C:										
Monadnock, very bouldery	8X	Slight	Moderate	Slight	Slight	Moderate	eastern white pine--	65	114	eastern white pine, red pine, red spruce
							sugar maple---------	60	43	
							red pine------------	60	100	
							white spruce--------	55	129	
654C:										
Monadnock, very bouldery	8X	Slight	Moderate	Slight	Slight	Moderate	eastern white pine--	65	114	eastern white pine, red pine, red spruce
							sugar maple---------	60	43	
							red pine------------	60	100	
							white spruce--------	55	129	
Sabattis, very bouldery-	2W	Slight	Severe	Severe	Severe	Severe	red maple-----------	55	29	balsam fir, red spruce
							yellow birch--------	55	29	
							balsam fir----------	45	86	
							red spruce----------	35	72	
655B:										
Sunapee, very bouldery--	3A	Slight	Slight	Slight	Slight	Moderate	sugar maple---------	50	29	balsam fir, eastern white pine, white spruce
							red maple-----------	50	29	
							eastern white pine--	55	86	
							red spruce----------	45	100	
							balsam fir----------	50	114	
Monadnock, very bouldery	8X	Slight	Moderate	Slight	Slight	Moderate	eastern white pine--	65	114	eastern white pine, red pine, red spruce
							sugar maple---------	60	43	
							red pine------------	60	100	
							white spruce--------	55	129	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Management concerns: Plant competition	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
									cu ft/ac	
661C:										
Hermon, very bouldery---	7X	Slight	Moderate	Severe	Slight	Slight	eastern white pine--	65	114	balsam fir, eastern
							white spruce--------	45	100	white pine, red
							red spruce----------	46	100	pine
							red pine------------	59	100	
							sugar maple---------	55	29	
661D:										
Hermon, very bouldery---	7X	Moderate	Moderate	Severe	Slight	Slight	eastern white pine--	65	114	balsam fir, eastern
							white spruce--------	45	100	white pine, red
							red spruce----------	46	100	pine
							red pine------------	59	100	
							sugar maple---------	55	29	
708B:										
Adirondack, very bouldery---------------	3W	Slight	Severe	Slight	Slight	Severe	balsam fir----------	45	100	balsam fir, eastern
							red maple-----------	55	29	white pine, red
							yellow birch--------	50	29	spruce, white
							eastern white pine--	55	86	spruce
							red spruce----------	40	86	
Sabattis, undrained; very bouldery----------	2W	Slight	Severe	Severe	Severe	Severe	red maple-----------	55	29	balsam fir, red
							yellow birch--------	55	29	spruce
							balsam fir----------	45	86	
							red spruce----------	35	72	
Tughill, very bouldery--	2W	Slight	Severe	Severe	Severe	---	red maple-----------	50	29	balsam fir, eastern
							red spruce----------	35	72	white pine
							balsam fir----------	40	86	
721C:										
Becket, very bouldery---	9A	Slight	Slight	Slight	Moderate	Moderate	sugar maple---------	60	43	Norway spruce,
							yellow birch--------	55	29	eastern white
							American beech------	60	43	pine, sugar maple
Tunbridge, very bouldery	3A	Slight	Slight	Slight	Moderate	Slight	sugar maple---------	65	43	balsam fir, eastern
							yellow birch--------	55	29	white pine, red
							American beech------	65	43	spruce, sugar
										maple

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
Skerry, very bouldery---	10A	Slight	Slight	Slight	Moderate	Moderate	sugar maple---------	50	29	eastern white pine, white spruce
							eastern white pine--	55	86	
							white spruce--------	50	114	
							balsam fir----------	50	114	
721D:										
Becket, very bouldery---	9R	Moderate	Moderate	Slight	Moderate	Moderate	sugar maple---------	60	43	Norway spruce, eastern white pine, sugar maple
							yellow birch--------	55	29	
							American beech------	60	43	
Tunbridge, very bouldery	3R	Moderate	Moderate	Slight	Moderate	Slight	sugar maple---------	65	43	balsam fir, eastern white pine, red spruce, sugar maple
							yellow birch--------	55	29	
							American beech------	65	43	
723C:										
Becket, very bouldery---	9A	Slight	Slight	Slight	Moderate	Moderate	sugar maple---------	60	43	Norway spruce, eastern white pine, sugar maple
							yellow birch--------	55	29	
							American beech------	60	43	
723D:										
Becket, very bouldery---	9R	Moderate	Moderate	Slight	Moderate	Moderate	sugar maple---------	60	43	Norway spruce, eastern white pine, sugar maple
							yellow birch--------	55	29	
							American beech------	60	43	
725B:										
Skerry, very bouldery---	10A	Slight	Slight	Slight	Moderate	Moderate	sugar maple---------	50	29	eastern white pine, white spruce
							eastern white pine--	55	86	
							white spruce--------	50	114	
							balsam fir----------	50	114	
Becket, very bouldery---	9A	Slight	Slight	Slight	Moderate	Moderate	sugar maple---------	60	43	Norway spruce, eastern white pine, sugar maple
							yellow birch--------	55	29	
							American beech------	60	43	
727B:										
Skerry, very bouldery---	10A	Slight	Slight	Slight	Moderate	Moderate	sugar maple---------	50	29	eastern white pine, white spruce
							eastern white pine--	55	86	
							white spruce--------	50	114	
							balsam fir----------	50	114	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
Adirondack, very bouldery	3W	Slight	Severe	Slight	Slight	Severe	balsam fir	45	100	balsam fir, eastern white pine, red spruce, white spruce
							red maple	55	29	
							yellow birch	50	29	
							eastern white pine	55	86	
							red spruce	40	86	
831C:										
Tunbridge, very bouldery	3A	Slight	Slight	Slight	Moderate	Slight	sugar maple	65	43	balsam fir, eastern white pine, red spruce, sugar maple
							yellow birch	55	29	
							American beech	65	43	
Lyman, very bouldery	2D	Slight	Slight	Moderate	Severe	Moderate	red spruce	40	86	balsam fir, eastern white pine, white spruce
							red maple	45	14	
							yellow birch	35	14	
831D:										
Tunbridge, very bouldery	3R	Moderate	Moderate	Slight	Moderate	Slight	sugar maple	65	43	balsam fir, eastern white pine, red spruce, sugar maple
							yellow birch	55	29	
							American beech	65	43	
Lyman, very bouldery	2D	Moderate	Moderate	Moderate	Severe	Moderate	red spruce	40	86	balsam fir, eastern white pine, white spruce
							red maple	45	14	
							yellow birch	35	14	
831F:										
Tunbridge, very bouldery	3R	Severe	Severe	Slight	Moderate	Slight	sugar maple	65	43	balsam fir, eastern white pine, red spruce, sugar maple
							yellow birch	55	29	
							American beech	65	43	
Lyman, very bouldery	2R	Severe	Severe	Moderate	Severe	Moderate	red spruce	40	86	balsam fir, eastern white pine, white spruce
							red maple	45	14	
							yellow birch	35	14	
861F:										
Lyman, very bouldery	2R	Severe	Severe	Moderate	Severe	Moderate	red spruce	40	86	balsam fir, eastern white pine, white spruce
							red maple	45	14	
							yellow birch	35	14	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
Ricker, very bouldery---	2R	Severe	Severe	Severe	Severe	---	red spruce----------	20	29	jack pine
							balsam fir----------	20	57	
							yellow birch--------	---	---	
							paper birch---------	---	---	
							jack pine-----------	---	---	
931C:										
Mundalite, very bouldery	---	Slight	Slight	Slight	Moderate	Slight	sugar maple---------	60	43	Norway spruce, balsam fir, eastern white pine, red spruce
							yellow birch--------	50	29	
							paper birch---------	---	---	
							American beech------	---	---	
							balsam fir----------	---	---	
							red spruce----------	---	---	
Rawsonville, very bouldery---------------	3A	Moderate	Moderate	Slight	Moderate	Slight	sugar maple---------	60	43	balsam fir, eastern white pine, red spruce
							American beech------	60	43	
							yellow birch--------	55	29	
							paper birch---------	---	---	
							red spruce----------	45	100	
							balsam fir----------	---	---	
Worden, very bouldery---	2W	Moderate	Severe	Slight	Moderate	Severe	red maple-----------	50	29	balsam fir, eastern white pine, red spruce, white spruce
							yellow birch--------	50	29	
							paper birch---------	55	43	
							white ash-----------	---	---	
							red spruce----------	---	---	
							balsam fir----------	---	---	
							eastern white pine--	---	---	
931D:										
Mundalite, very bouldery	---	Moderate	Moderate	Slight	Moderate	Slight	sugar maple---------	60	43	Norway spruce, balsam fir, eastern white pine, red spruce
							yellow birch--------	50	29	
							paper birch---------	---	---	
							American beech------	---	---	
							balsam fir----------	---	---	
							red spruce----------	---	---	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
Rawsonville, very bouldery	3R	Severe	Moderate	Slight	Moderate	Slight	sugar maple	60	43	balsam fir, eastern white pine, red spruce
							American beech	60	43	
							yellow birch	55	29	
							paper birch	---	---	
							red spruce	45	100	
							balsam fir	---	---	
933C:										
Mundalite, very bouldery	---	Slight	Slight	Slight	Moderate	Slight	sugar maple	60	43	Norway spruce, balsam fir, eastern white pine, red spruce
							yellow birch	50	29	
							paper birch	---	---	
							American beech	---	---	
							balsam fir	---	---	
							red spruce	---	---	
Worden, very bouldery	2W	Moderate	Severe	Slight	Moderate	Severe	red maple	50	29	balsam fir, eastern white pine, red spruce, white spruce
							yellow birch	50	29	
							paper birch	55	43	
							white ash	---	---	
							red spruce	---	---	
							balsam fir	---	---	
							eastern white pine	---	---	
941C:										
Rawsonville, very bouldery	3A	Moderate	Moderate	Slight	Moderate	Slight	sugar maple	60	43	balsam fir, eastern white pine, red spruce
							American beech	60	43	
							yellow birch	55	29	
							paper birch	---	---	
							red spruce	45	100	
							balsam fir	---	---	
Hogback, very bouldery	2D	Moderate	Severe	Moderate	Severe	Slight	red spruce	40	86	balsam fir, red spruce
							yellow birch	35	14	
							paper birch	---	---	
							American beech	---	---	
							balsam fir	48	86	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Management concerns: Plant competition	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
									cu ft/ac	
941D:										
Rawsonville, very bouldery	3R	Severe	Moderate	Slight	Moderate	Slight	sugar maple	60	43	balsam fir, eastern white pine, red spruce
							American beech	60	43	
							yellow birch	55	29	
							paper birch	---	---	
							red spruce	45	100	
							balsam fir	---	---	
Hogback, very bouldery	2D	Severe	Severe	Moderate	Severe	Slight	red spruce	40	86	balsam fir, red spruce
							yellow birch	35	14	
							paper birch	---	---	
							American beech	---	---	
							balsam fir	48	86	
941F:										
Rawsonville, very bouldery	3R	Severe	Severe	Slight	Moderate	Slight	sugar maple	60	43	balsam fir, eastern white pine, red spruce
							American beech	60	43	
							yellow birch	55	29	
							paper birch	---	---	
							red spruce	45	100	
							balsam fir	---	---	
Hogback, very bouldery	2R	Severe	Severe	Moderate	Severe	Slight	red spruce	40	86	balsam fir, red spruce
							yellow birch	35	14	
							paper birch	---	---	
							American beech	---	---	
							balsam fir	48	86	
943C:										
Rawsonville, very bouldery	3A	Moderate	Moderate	Slight	Moderate	Slight	sugar maple	60	43	balsam fir, eastern white pine, red spruce
							American beech	60	43	
							yellow birch	55	29	
							paper birch	---	---	
							red spruce	45	100	
							balsam fir	---	---	
Borosaprists	---	---	---	---	---	---	black spruce	20	29	black spruce
							tamarack	---	---	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
Ricker, very bouldery---	2D	Slight	Slight	Moderate	Severe	Moderate	red spruce----------	20	29	jack pine
							balsam fir----------	20	57	
							yellow birch--------	---	---	
							paper birch---------	---	---	
							jack pine-----------	---	---	
945F:										
Hogback, very bouldery--	2R	Severe	Severe	Moderate	Severe	Slight	red spruce----------	40	86	balsam fir, red spruce
							yellow birch--------	35	14	
							paper birch---------	---	---	
							American beech------	---	---	
							balsam fir----------	48	86	
Ricker, very bouldery---	2R	Severe	Severe	Severe	Severe	---	red spruce----------	20	29	jack pine
							balsam fir----------	20	57	
							yellow birch--------	---	---	
							paper birch---------	---	---	
							jack pine-----------	---	---	
949F:										
Rock outcrop------------	---	---	---	---	---	---	---	---	---	---
Ricker, very bouldery---	2R	Severe	Severe	Severe	Severe	---	red spruce----------	20	29	jack pine
							balsam fir----------	20	57	
							yellow birch--------	---	---	
							paper birch---------	---	---	
							jack pine-----------	---	---	
Hogback, very bouldery--	2R	Severe	Severe	Moderate	Severe	Slight	red spruce----------	40	86	balsam fir, red spruce
							yellow birch--------	35	14	
							paper birch---------	---	---	
							American beech------	---	---	
							balsam fir----------	48	86	
991D:										
Glebe, very bouldery----	8R	Severe	Moderate	Slight	Moderate	Slight	red spruce----------	32	57	balsam fir, red spruce
							balsam fir----------	30	57	
							paper birch---------	53	57	
							yellow birch--------	50	29	
							American mountainash	---	---	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
Skylight, very bouldery-	3R	Moderate	Moderate	Moderate	Severe	Moderate	balsam fir----------	25	43	balsam fir, red spruce
							red spruce----------	25	43	
							paper birch---------	35	14	
							yellow birch--------	35	14	
							striped maple-------	---	---	
							American mountainash	---	---	
997F:										
Ricker, very bouldery---	2R	Severe	Severe	Severe	Severe	---	red spruce----------	20	29	jack pine
							balsam fir----------	20	57	
							yellow birch--------	---	---	
							paper birch---------	---	---	
							jack pine-----------	---	---	
Skylight, very bouldery-	3R	Severe	Severe	Moderate	Severe	Moderate	balsam fir----------	25	43	balsam fir, red spruce
							red spruce----------	25	43	
							paper birch---------	35	14	
							yellow birch--------	35	14	
							striped maple-------	---	---	
							American mountainash	---	---	
Rock Outcrop------------	---	---	---	---	---	---	---	---	---	---
AbA:										
Adams-------------------	3S	Slight	Slight	Severe	Slight	---	eastern white pine--	70	129	balsam fir, eastern white pine, red spruce
							red pine------------	55	86	
							balsam fir----------	50	114	
AbB:										
Adams-------------------	3S	Slight	Slight	Severe	Slight	---	eastern white pine--	70	129	balsam fir, eastern white pine, red spruce
							red pine------------	55	86	
							balsam fir----------	50	114	
AbC:										
Adams-------------------	3S	Slight	Slight	Severe	Slight	---	eastern white pine--	70	129	balsam fir, eastern white pine, red spruce
							red pine------------	55	86	
							balsam fir----------	50	114	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
AbD:										
Adams	3S	Slight	Moderate	Severe	Slight	---	eastern white pine	70	129	balsam fir, eastern white pine, red spruce
							red pine	55	86	
							balsam fir	50	114	
AgB:										
Adirondack	3W	Slight	Moderate	Slight	Slight	Severe	balsam fir	45	100	balsam fir, eastern white pine, red spruce, white spruce
							red maple	55	29	
							yellow birch	50	29	
							eastern white pine	55	86	
							red spruce	40	86	
AhB:										
Adirondack, very bouldery	3W	Slight	Severe	Slight	Slight	Severe	balsam fir	45	100	balsam fir, eastern white pine, red spruce, white spruce
							red maple	55	29	
							yellow birch	50	29	
							eastern white pine	55	86	
							red spruce	40	86	
Ak:										
Adjidaumo	2W	Slight	Severe	Severe	Severe	---	red maple	50	29	eastern arborvitae, eastern white pine, white spruce
							black ash	---	---	
							eastern white pine	55	86	
Am:										
Adjidaumo, mucky silty clay	2W	Slight	Severe	Severe	Severe	---	red maple	50	29	eastern arborvitae, eastern white pine, white spruce
							black ash	---	---	
							eastern white pine	55	86	
AtA:										
Amenia	3A	Slight	Slight	Slight	Slight	---	sugar maple	65	43	European larch, Norway spruce, eastern white pine, red pine
							northern red oak	70	57	
							eastern white pine	75	143	
							white ash	75	43	
							American basswood	---	---	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Management concerns: Plant competition	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
									cu ft/ac	
AtB:										
Amenia	3A	Slight	Slight	Slight	Slight	---	sugar maple	65	43	European larch, Norway spruce, eastern white pine, red pine
							northern red oak	70	57	
							eastern white pine	75	143	
							white ash	75	43	
							American basswood	---	---	
AwA:										
Appleton	4W	Slight	Moderate	Moderate	Moderate	---	northern red oak	70	57	European larch, Norway spruce, eastern arborvitae, eastern white pine, white spruce
							red maple	70	43	
							eastern white pine	75	143	
							eastern arborvitae	---	---	
AwB:										
Appleton	4W	Slight	Moderate	Moderate	Moderate	---	northern red oak	70	57	European larch, Norway spruce, eastern arborvitae, eastern white pine, white spruce
							red maple	70	43	
							eastern white pine	75	143	
							eastern arborvitae	---	---	
BcB:										
Becket	9A	Slight	Slight	Slight	Moderate	Moderate	sugar maple	60	43	Norway spruce, eastern white pine, sugar maple
							yellow birch	55	29	
							American beech	60	43	
BeC:										
Becket, very bouldery	9A	Slight	Slight	Slight	Moderate	Moderate	sugar maple	60	43	Norway spruce, eastern white pine, sugar maple
							yellow birch	55	29	
							American beech	60	43	
BeD:										
Becket, very bouldery	9R	Moderate	Moderate	Slight	Moderate	Moderate	sugar maple	60	43	Norway spruce, eastern white pine, sugar maple
							yellow birch	55	29	
							American beech	60	43	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Trees to manage
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									cu ft/ac	
BgC:										
Becket, very bouldery---	9A	Slight	Slight	Slight	Moderate	Moderate	sugar maple---------	60	43	Norway spruce, eastern white pine, sugar maple
							yellow birch--------	55	29	
							American beech------	60	43	
Tunbridge, very bouldery	3A	Slight	Slight	Slight	Moderate	Slight	sugar maple---------	65	43	balsam fir, eastern white pine, red spruce
							yellow birch--------	55	29	
							American beech------	65	43	
BgE:										
Becket, very bouldery---	9R	Moderate	Moderate	Slight	Moderate	Moderate	sugar maple---------	60	43	Norway spruce, eastern white pine, sugar maple
							yellow birch--------	55	29	
							American beech------	60	43	
Tunbridge, very bouldery	3R	Moderate	Moderate	Slight	Moderate	Slight	sugar maple---------	65	43	balsam fir, eastern white pine, red spruce
							yellow birch--------	55	29	
							American beech------	65	43	
BhC:										
Benson------------------	2D	Slight	Slight	Severe	Severe	Moderate	sugar maple---------	50	29	eastern white pine
							eastern white pine--	55	86	
							American beech------	---	---	
							yellow birch--------	---	---	
							basswood------------	---	---	
							northern red oak----	---	---	
							white ash-----------	---	---	
							eastern arborvitae--	---	---	
							eastern hemlock-----	---	---	
BhE:										
Benson------------------	2R	Severe	Severe	Severe	Severe	Moderate	sugar maple---------	50	29	eastern white pine
							eastern white pine--	55	86	
							American beech------	---	---	
							yellow birch--------	---	---	
							basswood------------	---	---	
							northern red oak----	---	---	
							white ash-----------	---	---	
							eastern arborvitae--	---	---	
							eastern hemlock-----	---	---	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
Bo:										
Beseman	3W	Slight	Severe	Severe	Severe	Severe	black spruce	20	29	black spruce,
							tamarack	35	29	tamarack
BrB:										
Bice	3A	Slight	Slight	Slight	Slight	---	eastern white pine	65	114	European larch,
							red pine	70	129	eastern white
							northern red oak	65	43	pine, red pine,
							shagbark hickory	---	---	white spruce
BrC:										
Bice	3A	Slight	Slight	Slight	Slight	---	eastern white pine	65	114	European larch,
							red pine	70	129	eastern white
							northern red oak	65	43	pine, red pine,
							shagbark hickory	---	---	white spruce
BsC:										
Bice, very stony	3A	Slight	Slight	Slight	Slight	---	eastern white pine	65	114	European larch,
							red pine	70	129	eastern white
							northern red oak	65	43	pine, red pine,
							shagbark hickory	---	---	white spruce
BvB:										
Bombay	3A	Slight	Slight	Slight	Slight	---	black cherry	80	57	European larch,
							northern red oak	80	57	Norway spruce,
							sugar maple	70	43	eastern white pine
Bx:										
Bucksport	2W	Slight	Severe	Severe	Severe	Severe	black spruce	20	29	black spruce,
							balsam fir	30	57	tamarack
							tamarack	---	---	
							red maple	---	---	
							eastern arborvitae	---	---	
							gray birch	---	---	
CgA:										
Champlain	8R	Moderate	Severe	Severe	Slight	---	eastern white pine	66	114	eastern white pine,
							northern red oak	---	---	northern red oak,
							red pine	---	---	red pine

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
CgB:										
Champlain	8R	Moderate	Severe	Severe	Slight	---	eastern white pine	66	114	eastern white pine, northern red oak, red pine
							northern red oak	---	---	
							red pine	---	---	
CgC:										
Champlain	8R	Moderate	Severe	Severe	Slight	---	eastern white pine	66	114	eastern white pine, northern red oak, red pine
							northern red oak	---	---	
							red pine	---	---	
ChF:										
Champlain	8R	Moderate	Severe	Severe	Slight	---	eastern white pine	66	114	eastern white pine, northern red oak, red pine
							northern red oak	---	---	
							red pine	---	---	
Adams	3R	Moderate	Severe	Severe	Slight	---	eastern white pine	70	129	balsam fir, eastern white pine, red spruce
							red pine	55	86	
							balsam fir	50	114	
Ck:										
Churubusco	3W	Slight	Severe	Severe	Severe	Severe	black spruce	20	29	black spruce
							balsam fir	30	57	
							red maple	---	---	
							paper birch	---	---	
							quaking aspen	---	---	
ClC:										
Colosse, very stony	3S	Slight	Slight	Moderate	Slight	---	northern red oak	70	57	European larch, Norway spruce, eastern white pine, red pine
							sugar maple	60	43	
							white ash	70	29	
Hermon, very stony	7S	Slight	Slight	Moderate	Slight	Slight	eastern white pine	65	114	European larch, eastern white pine, red pine
							sugar maple	55	29	
							white spruce	45	100	
							red pine	59	100	
							red spruce	46	100	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Management concerns: Plant competition	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
									cu ft/ac	
CmB:										
Colosse	3S	Slight	Slight	Moderate	Slight	---	sugar maple	60	43	European larch, Norway spruce, eastern white pine, red pine
							northern red oak	70	57	
							white ash	70	29	
Trout River	3S	Slight	Slight	Severe	Slight	---	eastern white pine	62	114	eastern white pine, red pine
							red pine	52	86	
							sugar maple	61	43	
CmC:										
Colosse	3S	Slight	Slight	Moderate	Slight	---	sugar maple	60	43	European larch, Norway spruce, eastern white pine, red pine
							northern red oak	70	57	
							white ash	70	29	
Trout River	3S	Slight	Slight	Severe	Slight	---	eastern white pine	62	114	eastern white pine, red pine
							sugar maple	61	43	
							red pine	52	86	
CnC:										
Colosse, very stony	3S	Slight	Slight	Moderate	Slight	---	sugar maple	60	43	European larch, Norway spruce, eastern white pine, red pine
							northern red oak	70	57	
							white ash	70	29	
Trout River, very stony	3S	Slight	Slight	Severe	Slight	---	eastern white pine	62	114	eastern white pine, red pine
							sugar maple	61	43	
							red pine	52	86	
CnD:										
Colosse, very stony	3S	Slight	Moderate	Moderate	Slight	---	northern red oak	70	57	European larch, Norway spruce, eastern white pine, red pine
							sugar maple	60	43	
							white ash	70	29	
Trout River, very stony	3S	Slight	Moderate	Severe	Slight	---	eastern white pine	62	114	eastern white pine, red pine
							sugar maple	61	43	
							red pine	52	86	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
CoA:										
Colton	3S	Slight	Slight	Severe	Slight	---	eastern white pine	70	129	balsam fir, eastern white pine, red spruce
							sugar maple	61	43	
							red spruce	45	100	
							red pine	55	86	
							balsam fir	50	114	
CoB:										
Colton	3S	Slight	Slight	Severe	Slight	---	eastern white pine	70	129	balsam fir, eastern white pine, red spruce
							sugar maple	61	43	
							red spruce	45	100	
							red pine	55	86	
							balsam fir	50	114	
CoC:										
Colton	3S	Slight	Slight	Severe	Slight	---	eastern white pine	70	129	balsam fir, eastern white pine, red spruce
							sugar maple	61	43	
							red spruce	45	100	
							red pine	55	86	
							balsam fir	50	114	
CpC:										
Colton, very stony	3S	Slight	Slight	Severe	Slight	---	eastern white pine	70	129	balsam fir, eastern white pine, red spruce
							sugar maple	61	43	
							red spruce	45	100	
							red pine	55	86	
							balsam fir	50	114	
CpE:										
Colton, very stony	3S	Slight	Moderate	Severe	Slight	---	eastern white pine	70	129	balsam fir, eastern white pine, red spruce
							sugar maple	61	43	
							red spruce	45	100	
							red pine	55	86	
							balsam fir	50	114	
Crk:										
Cook	6W	Slight	Severe	Severe	Severe	Severe	eastern white pine	55	86	eastern arborvitae
							red maple	50	29	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
Crr:										
Cornish-----------------	8W	Slight	Moderate	Slight	Moderate	Severe	eastern white pine--	65	114	European larch, black spruce, red spruce, tamarack
							balsam fir----------	55	114	
							red spruce----------	45	100	
							red maple-----------	57	29	
							gray birch----------	---	---	
Cs:										
Covert------------------	4A	Slight	Slight	Moderate	Slight	Moderate	eastern white pine--	65	114	eastern white pine, red pine
							northern red oak----	60	43	
							red maple-----------	66	43	
							black cherry--------	---	---	
							American basswood---	---	---	
							white oak-----------	---	---	
							quaking aspen-------	---	---	
CtsA:										
Covertfalls-------------	9S	Slight	Slight	Moderate	Slight	---	eastern white pine--	70	129	Norway spruce, eastern white pine
							northern red oak----	60	43	
							red maple-----------	---	---	
CtsB:										
Covertfalls-------------	9S	Slight	Slight	Moderate	Slight	---	eastern white pine--	70	129	Norway spruce, eastern white pine
							northern red oak----	60	43	
							red maple-----------	---	---	
CttB:										
Covertfalls, gravelly---	9S	Slight	Slight	Moderate	Slight	---	eastern white pine--	70	129	Norway spruce, eastern white pine
							northern red oak----	60	43	
							red maple-----------	---	---	
CvA:										
Coveytown---------------	2W	Slight	Moderate	Moderate	Moderate	---	red maple-----------	55	29	eastern white pine, white spruce
							eastern white pine--	65	114	
CvB:										
Coveytown---------------	2W	Slight	Moderate	Moderate	Moderate	---	red maple-----------	55	29	eastern white pine, white spruce
							eastern white pine--	65	114	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Management concerns: Plant competition	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
									cu ft/ac	
CwB:										
Coveytown, very stony	2W	Slight	Moderate	Moderate	Moderate	---	red maple	55	29	eastern white pine,
							eastern white pine	65	114	white spruce
CxA:										
Croghan	10S	Slight	Slight	Moderate	Slight	---	eastern white pine	65	114	European larch,
							sugar maple	55	29	Norway spruce,
							red maple	---	---	eastern white pine
CxB:										
Croghan	10S	Slight	Slight	Moderate	Slight	---	eastern white pine	65	114	European larch,
							sugar maple	55	29	Norway spruce,
							red maple	---	---	eastern white pine
DeA:										
Deerfield	8S	Slight	Slight	Moderate	Slight	---	eastern white pine	65	114	Douglas fir,
							northern red oak	60	43	European larch,
										eastern white
										pine, red pine,
										white spruce
DeB:										
Deerfield	8S	Slight	Slight	Moderate	Slight	---	eastern white pine	65	114	Douglas fir,
							northern red oak	60	43	European larch,
										eastern white
										pine, red pine,
										white spruce
Df:										
Deinache	2W	Slight	Severe	Severe	Severe	Severe	red maple	55	29	eastern white pine,
							eastern white pine	---	---	white spruce
							eastern arborvitae	---	---	
FeB:										
Fahey, loamy substratum	8A	Slight	Slight	Slight	Slight	Slight	eastern white pine	65	114	European larch,
							northern red oak	60	43	eastern white
							sugar maple	55	29	pine, white spruce

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Potential productivity: Common trees	Site index	Volume of wood fiber (cu ft/ac)	Trees to manage
FhB:										
Fahey, very stony-------	8A	Slight	Slight	Slight	Slight	Slight	eastern white pine--	65	114	European larch,
							northern red oak----	60	43	eastern white
							sugar maple---------	55	29	pine, white spruce
FkB:										
Fernlake----------------	7S	Slight	Slight	Moderate	Slight	---	American beech------	---	---	European larch,
							eastern white pine--	60	100	eastern white
							paper birch---------	---	---	pine, red pine
							sugar maple---------	---	---	
FlB:										
Fernlake, very bouldery-	7S	Slight	Slight	Moderate	Slight	---	American beech------	---	---	European larch,
							eastern white pine--	60	100	eastern white
							paper birch---------	---	---	pine, red pine
							sugar maple---------	---	---	
FlC:										
Fernlake, very bouldery-	7S	Slight	Slight	Moderate	Slight	---	American beech------	---	---	European larch,
							eastern white pine--	60	100	eastern white
							paper birch---------	---	---	pine, red pine
							sugar maple---------	---	---	
FlD:										
Fernlake, very bouldery-	7S	Slight	Moderate	Moderate	Slight	---	American beech------	---	---	European larch,
							eastern white pine--	60	100	eastern white
							paper birch---------	---	---	pine, red pine
							sugar maple---------	---	---	
FlF:										
Fernlake, very bouldery-	7R	Moderate	Severe	Moderate	Slight	---	American beech------	---	---	European larch,
							eastern white pine--	60	100	eastern white
							paper birch---------	---	---	pine, red pine
							sugar maple---------	---	---	
FmB:										
Flackville--------------	3S	Slight	Slight	Slight	Slight	---	eastern white pine--	70	129	Norway spruce,
							northern red oak----	60	43	eastern white
							sugar maple---------	60	43	pine, white spruce

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
Fn:										
Fluvaquents, frequently flooded	---	---	---	---	---	---	---	---	---	---
Fluvaquents, frequently flooded	---	---	---	---	---	---	---	---	---	---
Udifluvents, frequently flooded	---	---	---	---	---	---	---	---	---	---
GfC:										
Gardenisle	3D	Slight	Slight	Slight	Slight	Severe	sugar maple	70	43	European larch, Norway spruce, eastern white pine
							eastern arborvitae	---	---	
							northern red oak	---	---	
Benson	2D	Slight	Slight	Severe	Severe	Moderate	sugar maple	50	29	eastern arborvitae, eastern white pine
							eastern white pine	55	86	
							yellow birch	---	---	
							American beech	---	---	
							white ash	---	---	
							eastern redcedar	---	---	
							northern red oak	---	---	
							eastern arborvitae	---	---	
							basswood	---	---	
							eastern hemlock	---	---	
Gl:										
Gougeville, undrained	3W	Slight	Severe	Severe	Severe	Severe	eastern arborvitae	---	---	eastern arborvitae, eastern white pine
							eastern white pine	---	---	
							green ash	---	---	
							red maple	60	43	
GrA:										
Grattan	9S	Slight	Slight	Moderate	Slight	Slight	eastern white pine	70	129	eastern white pine, red pine
							quaking aspen	---	---	
							red pine	55	86	
							sugar maple	59	43	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
GrB:										
Grattan	9S	Slight	Slight	Moderate	Slight	Slight	eastern white pine	70	129	eastern white pine, red pine
							quaking aspen	---	---	
							red pine	55	86	
							sugar maple	59	43	
GvB:										
Grenville	3A	Slight	Slight	Slight	Slight	Slight	sugar maple	70	43	Austrian pine, Douglas fir, European larch, Norway spruce, black walnut, eastern white pine
							northern red oak	70	57	
							American basswood	75	43	
							eastern white pine	75	143	
GwC:										
Grenville, very stony	3X	Slight	Slight	Slight	Slight	Slight	sugar maple	70	43	Austrian pine, Douglas fir, European larch, Norway spruce, black walnut, eastern white pine
							northern red oak	70	57	
							American basswood	75	43	
							eastern white pine	75	143	
Ha:										
Hailesboro	3W	Slight	Moderate	Moderate	Moderate	---	white ash	70	43	European larch, eastern white pine, white spruce
							northern red oak	70	57	
							eastern white pine	75	143	
							red maple	57	43	
HeB:										
Hermon	7S	Slight	Slight	Moderate	Slight	Slight	eastern white pine	65	114	European larch, eastern white pine, red pine
							sugar maple	55	29	
							white spruce	45	100	
							red pine	59	100	
							red spruce	46	100	
HeC:										
Hermon	7S	Slight	Slight	Moderate	Slight	Slight	eastern white pine	65	114	European larch, eastern white pine, red pine
							sugar maple	55	29	
							white spruce	45	100	
							red pine	59	100	
							red spruce	46	100	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Management concerns: Plant competition	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
									cu ft/ac	
HfC:										
Hermon, very bouldery---	7X	Slight	Moderate	Severe	Slight	Slight	eastern white pine--	65	114	European larch, eastern white pine, red pine
							sugar maple---------	55	29	
							white spruce--------	45	100	
							red pine------------	59	100	
							red spruce----------	46	100	
HfD:										
Hermon, very bouldery---	7X	Moderate	Moderate	Severe	Slight	Slight	eastern white pine--	65	114	European larch, eastern white pine, red pine
							sugar maple---------	55	29	
							white spruce--------	45	100	
							red pine------------	59	100	
							red spruce----------	46	100	
HgC:										
Hermon, very bouldery---	7X	Slight	Moderate	Severe	Slight	Slight	eastern white pine--	65	114	European larch, eastern white pine, red pine
							sugar maple---------	55	29	
							white spruce--------	45	100	
							red pine------------	59	100	
							red spruce----------	46	100	
Adirondack, very bouldery---------------	3W	Slight	Severe	Slight	Slight	Severe	balsam fir----------	45	100	balsam fir, eastern white pine, red spruce, white spruce
							red maple-----------	55	29	
							yellow birch--------	50	29	
							eastern white pine--	55	86	
							red spruce----------	40	86	
HlB:										
Heuvelton---------------	2A	Slight	Slight	Slight	Slight	---	northern red oak----	70	57	eastern white pine, white spruce
							sugar maple---------	65	43	
							eastern white pine--	75	143	
							white ash-----------	---	---	
HlD:										
Heuvelton---------------	2R	Severe	Moderate	Slight	Slight	---	northern red oak----	70	57	eastern white pine, white spruce
							sugar maple---------	65	43	
							eastern white pine--	75	143	
							white ash-----------	---	---	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Management concerns: Plant competition	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
									cu ft/ac	
HoA:										
Hogansburg	3A	Slight	Slight	Slight	Slight	---	sugar maple	65	43	European larch,
							eastern white pine	75	143	Norway spruce,
							American basswood	---	---	eastern white
							white ash	75	43	pine, white spruce
HoB:										
Hogansburg	3A	Slight	Slight	Slight	Slight	---	sugar maple	65	43	European larch,
							eastern white pine	75	143	Norway spruce,
							American basswood	---	---	eastern white
							white ash	75	43	pine, white spruce
HrB:										
Hogansburg, very stony	3A	Slight	Slight	Slight	Slight	---	sugar maple	65	43	European larch,
							eastern white pine	75	143	Norway spruce,
							American basswood	---	---	eastern white
							white ash	75	43	pine, white spruce
InB:										
Irona	2D	Slight	Slight	Moderate	Severe	---	northern red oak	---	---	balsam fir, eastern
							paper birch	---	---	white pine
							sugar maple	50	29	
Conic	4D	Slight	Moderate	Moderate	Severe	Slight	eastern white pine	45	72	Norway spruce,
							jack pine	50	72	eastern white
							paper birch	45	43	pine, sugar maple
							quaking aspen	45	29	
							red pine	45	57	
Jn:										
Junius	3W	Slight	Moderate	Moderate	Moderate	---	red maple	70	43	eastern arborvitae,
							eastern white pine	65	114	eastern white
							white ash	65	43	pine, white spruce
KhB:										
Kalurah	3A	Slight	Slight	Slight	Slight	---	sugar maple	65	43	Norway spruce,
							northern red oak	70	57	eastern white
							white oak	70	---	pine, red pine

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
KlB:										
Kalurah, very stony-----	4A	Slight	Slight	Slight	Slight	---	sugar maple---------	65	43	European larch, Norway spruce, eastern white pine, white spruce
							northern red oak----	70	57	
							white oak-----------	70	---	
Kr:										
Kingsbury---------------	3W	Slight	Moderate	Slight	Moderate	---	red maple-----------	70	43	eastern white pine, white spruce
							balsam fir----------	60	114	
							eastern white pine--	75	143	
							white ash-----------	67	43	
Rhinebeck---------------	3W	Slight	Moderate	Slight	Slight	---	sugar maple---------	60	43	European larch, Norway spruce, eastern white pine, white spruce
							northern red oak----	70	57	
							eastern white pine--	75	143	
							red maple-----------	70	43	
Ld:										
Lovewell, stratified substratum-------------	10A	Slight	Slight	Slight	Moderate	Moderate	eastern white pine--	75	143	European larch, eastern white pine, red spruce, white spruce
							balsam fir----------	65	129	
							red maple-----------	62	43	
Le:										
Loxley------------------	2W	Slight	Severe	Severe	Severe	Severe	black spruce--------	15	29	black spruce
							tamarack------------	---	---	
							balsam fir----------	---	---	
LtF:										
Lyman, very bouldery----	2R	Severe	Severe	Moderate	Severe	Moderate	red spruce----------	40	86	balsam fir, eastern white pine, white spruce
							red maple-----------	45	14	
							yellow birch--------	35	14	
Tunbridge, very bouldery	3R	Severe	Severe	Slight	Moderate	Slight	American beech------	---	---	balsam fir, eastern white pine, red spruce
							red spruce----------	---	---	
							yellow birch--------	---	---	
							yellow birch--------	---	---	
							sugar maple---------	60	43	
Rock Outcrop------------	---	---	---	---	---	---	---	---	---	---

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordi-nation symbol	Management concerns: Erosion hazard	Equip-ment limita-tion	Seedling mortal-ity	Wind-throw hazard	Plant competi-tion	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
Lv:										
Lyonmounten, undrained--	3W	Slight	Severe	Severe	Severe	Severe	eastern arborvitae--	---	---	balsam fir, eastern
							red maple-----------	55	29	arborvitae
Ly:										
Lyonmounten, very stony-	3W	Slight	Severe	Severe	Severe	Severe	eastern arborvitae--	---	---	balsam fir, eastern
							red maple-----------	55	29	arborvitae
MaB:										
Madrid------------------	3A	Slight	Slight	Slight	Slight	---	American basswood---	---	---	European larch,
							black cherry--------	80	57	Norway spruce,
							eastern white pine--	85	143	black locust,
							northern red oak----	80	57	eastern white
							sugar maple---------	70	43	pine, white spruce
							white oak-----------	80	57	
MaC:										
Madrid------------------	3A	Slight	Slight	Slight	Slight	---	American basswood---	---	---	European larch,
							black cherry--------	80	57	Norway spruce,
							eastern white pine--	85	143	black locust,
							northern red oak----	80	57	eastern white
							sugar maple---------	70	43	pine, white spruce
							white oak-----------	80	57	
MeA:										
Malone------------------	3W	Slight	Moderate	Moderate	Moderate	---	eastern arborvitae--	---	---	eastern white pine,
							northern red oak----	---	---	white spruce
							red maple-----------	70	43	
MeB:										
Malone------------------	3W	Slight	Moderate	Moderate	Moderate	---	eastern arborvitae--	---	---	eastern white pine,
							northern red oak----	---	---	white spruce
							red maple-----------	70	43	
MfB:										
Malone, very stony------	3W	Slight	Moderate	Moderate	Moderate	---	eastern arborvitae--	---	---	eastern white pine,
							northern red oak----	---	---	white spruce
							red maple-----------	70	43	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Management concerns: Plant competition	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
									cu ft/ac	
Mk:										
Markey------------------	2W	Slight	Severe	Severe	Severe	Severe	balsam fir----------	30	57	black spruce, tamarack
							red maple-----------	53	29	
							quaking aspen-------	60	57	
							tamarack------------	35	29	
Mn:										
Massena-----------------	10W	Slight	Moderate	Moderate	Moderate	---	eastern white pine--	75	143	eastern arborvitae, eastern white pine, white spruce
							northern red oak----	70	57	
							red maple-----------	70	43	
Mp:										
Medomak, stratified substratum------------	6W	Slight	Severe	Severe	Severe	Severe	eastern white pine--	55	86	balsam fir, black spruce
							tamarack------------	---	---	
							red maple-----------	47	29	
							gray birch----------	---	---	
							black spruce--------	---	---	
Ms:										
Mino--------------------	3W	Slight	Moderate	Moderate	Moderate	---	white ash-----------	69	43	European larch, eastern white pine, white spruce
							northern red oak----	70	57	
							eastern white pine--	75	10	
MtB:										
Monadnock---------------	8A	Slight	Slight	Slight	Slight	Moderate	eastern white pine--	65	114	eastern white pine, red pine, white spruce
							sugar maple---------	60	43	
							red pine------------	60	100	
							white spruce--------	55	129	
MtC:										
Monadnock---------------	8A	Slight	Slight	Slight	Slight	Moderate	eastern white pine--	65	114	eastern white pine, red pine, white spruce
							sugar maple---------	60	43	
							red pine------------	60	100	
							white spruce--------	55	129	
MuC:										
Monadnock, very bouldery	8X	Slight	Moderate	Slight	Slight	Moderate	eastern white pine--	65	114	eastern white pine, red pine, white spruce
							sugar maple---------	60	43	
							red pine------------	60	100	
							white spruce--------	55	129	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Management concerns: Plant competition	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
									cu ft/ac	
MuD:										
Monadnock, very bouldery	8X	Moderate	Severe	Slight	Slight	Moderate	eastern white pine--	65	114	eastern white pine, red pine, white spruce
							sugar maple---------	60	43	
							red pine------------	60	100	
							white spruce--------	55	129	
MuF:										
Monadnock, very bouldery	8R	Severe	Severe	Slight	Slight	Moderate	eastern white pine--	65	114	eastern white pine, red pine, white spruce
							sugar maple---------	60	43	
							red pine------------	60	100	
							white spruce--------	55	129	
MvA:										
Mooers------------------	8S	Slight	Slight	Moderate	Slight	---	eastern white pine--	65	114	Norway spruce, eastern white pine, red pine
							sugar maple---------	55	29	
MvB:										
Mooers------------------	8S	Slight	Slight	Moderate	Slight	---	eastern white pine--	65	114	Norway spruce, eastern white pine, red pine
							sugar maple---------	55	29	
MwA:										
Muskellunge-------------	3W	Slight	Moderate	Slight	Slight	---	sugar maple---------	65	43	European larch, Norway spruce, eastern white pine, white spruce
							northern red oak----	70	57	
							eastern white pine--	75	143	
							red maple-----------	70	43	
MwB:										
Muskellunge-------------	3W	Slight	Moderate	Slight	Slight	---	sugar maple---------	65	43	European larch, Norway spruce, eastern white pine, white spruce
							northern red oak----	70	57	
							eastern white pine--	75	143	
							red maple-----------	70	43	
NeC:										
Neckrock----------------	3D	Slight	Slight	Slight	Slight	---	sugar maple---------	65	43	European larch, Norway spruce, eastern white pine
							eastern arborvitae--	---	---	
							white ash-----------	---	---	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
Summerville	2D	Slight	Moderate	Moderate	Severe	Slight	sugar maple	57	29	eastern arborvitae, eastern white pine, white spruce
							paper birch	53	57	
							American beech	---	---	
							quaking aspen	---	---	
							eastern arborvitae	---	---	
							balsam fir	---	---	
							eastern white pine	50	86	
NoB:										
Nicholville	3A	Slight	Slight	Slight	Slight	---	sugar maple	65	43	European larch, Norway spruce, eastern white pine, white spruce
							northern red oak	70	57	
							eastern white pine	75	143	
NrA:										
Northway	3W	Slight	Moderate	Slight	Moderate	Moderate	red maple	70	43	eastern arborvitae, eastern white pine, white spruce
							eastern white pine	75	143	
							quaking aspen	---	---	
NrB:										
Northway	3W	Slight	Moderate	Slight	Moderate	Moderate	red maple	70	43	eastern arborvitae, eastern white pine, white spruce
							eastern white pine	75	143	
							quaking aspen	---	---	
OcA:										
Occur	8S	Slight	Slight	Moderate	Slight	---	eastern white pine	65	114	Norway spruce, eastern white pine
							sugar maple	55	29	
							quaking aspen	---	---	
OcB:										
Occur	8S	Slight	Slight	Moderate	Slight	---	eastern white pine	65	114	Norway spruce, eastern white pine
							sugar maple	55	29	
							quaking aspen	---	---	
OgB:										
Ogdensburg	3W	Slight	Moderate	Moderate	Moderate	---	red maple	60	43	European larch, Norway spruce, white spruce
							northern red oak	70	57	
							eastern arborvitae	---	---	
							American basswood	---	---	
							white ash	78	43	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
									cu ft/ac	
PeA: Peasleeville	3W	Slight	Moderate	Moderate	Moderate	---	red maple eastern white pine	60 60	43 100	Norway spruce, eastern white pine, white spruce
PeB: Peasleeville	3W	Slight	Moderate	Moderate	Moderate	---	red maple eastern white pine	60 60	43 100	Norway spruce, eastern white pine, white spruce
PfB: Peasleeville, very stony	3W	Slight	Moderate	Moderate	Moderate	---	red maple eastern white pine	60 60	43 100	Norway spruce, eastern white pine, white spruce
Pg: Pinconning, undrained	3W	Slight	Severe	Severe	Severe	Severe	quaking aspen black ash eastern arborvitae red maple paper birch	50 --- --- 55 ---	43 --- --- 29 ---	balsam fir, eastern arborvitae
Ph: Pipestone	3W	Slight	Severe	Moderate	Moderate	Severe	red maple white ash eastern cottonwood bitternut hickory eastern white pine American basswood	65 --- --- --- 64 60	43 --- --- --- 114 43	eastern white pine, white spruce
Pn: Pits, Gravel	---	---	---	---	---	---	---	---	---	---
Po: Pits, Quarry	---	---	---	---	---	---	---	---	---	---
Pp: Pits, Sand	---	---	---	---	---	---	---	---	---	---

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Management concerns: Plant competition	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
									cu ft/ac	
PtA:										
Plainfield	8S	Slight	Slight	Moderate	Slight	Slight	eastern white pine	70	129	eastern white pine, jack pine, red pine
							red pine	55	86	
							quaking aspen	---	---	
PtB:										
Plainfield	8S	Slight	Slight	Moderate	Slight	Slight	eastern white pine	70	129	eastern white pine, jack pine, red pine
							red pine	55	86	
							quaking aspen	---	---	
PtC:										
Plainfield	8S	Slight	Slight	Moderate	Slight	Slight	eastern white pine	70	129	eastern white pine, jack pine, red pine
							red pine	55	86	
							quaking aspen	---	---	
PvF:										
Plainfield	8R	Severe	Severe	Severe	Slight	Slight	eastern white pine	70	129	eastern white pine, jack pine, red pine
							red pine	55	86	
							quaking aspen	---	---	
Grattan	9S	Slight	Slight	Moderate	Slight	Slight	eastern white pine	70	129	eastern white pine, red pine
							quaking aspen	---	---	
							red pine	55	86	
							sugar maple	59	43	
RoB:										
Rock Outcrop	---	---	---	---	---	---	---	---	---	---
Ricker	2D	Slight	Slight	Moderate	Severe	Moderate	red spruce	20	29	jack pine
							balsam fir	20	57	
							yellow birch	---	---	
							paper birch	---	---	
							jack pine	---	---	
Rr:										
Roundabout	9W	Slight	Severe	Moderate	Severe	Severe	eastern white pine	75	143	European larch, balsam fir, eastern white pine, white spruce
							balsam fir	55	114	
							red maple	55	29	
							gray birch	---	129	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Management concerns: Plant competition	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
									cu ft/ac	
Ry:										
Runeberg	5W	Slight	Severe	Severe	Severe	Severe	eastern arborvitae	45	72	balsam fir, eastern arborvitae
							red maple	60	43	
							black ash	---	---	
Sb:										
Sabattis, undrained; very bouldery	2W	Slight	Severe	Severe	Severe	Severe	red maple	55	29	balsam fir, red spruce
							yellow birch	55	29	
							balsam fir	45	86	
							red spruce	35	72	
Se:										
Saprists, ponded	---	---	---	---	---	---	---	---	---	---
Aquents, ponded	---	---	---	---	---	---	---	---	---	---
ShB:										
Schroon	2A	Slight	Slight	Slight	Slight	---	sugar maple	55	29	European larch, eastern white pine, red pine, white spruce
							eastern white pine	55	86	
							red spruce	50	114	
							white spruce	50	114	
							black cherry	72	43	
ShC:										
Schroon	2A	Slight	Slight	Slight	Slight	---	sugar maple	55	29	European larch, eastern white pine, red pine, white spruce
							eastern white pine	55	86	
							red spruce	50	114	
							white spruce	50	114	
							black cherry	72	43	
SkB:										
Schroon, very stony	2D	Slight	Slight	Slight	Slight	---	sugar maple	55	29	European larch, eastern white pine, red pine, white spruce
							eastern white pine	55	86	
							red spruce	50	114	
							white spruce	50	114	
							black cherry	72	43	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Management concerns: Plant competition	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber (cu ft/ac)	Trees to manage
Sn:										
Sciota	3W	Slight	Moderate	Moderate	Moderate	---	red maple	60	43	eastern arborvitae, eastern white pine, white spruce
							eastern arborvitae	---	---	
							eastern white pine	65	114	
So:										
Shaker	2W	Slight	Severe	Moderate	Severe	Severe	red maple	60	43	eastern white pine, white spruce
							eastern white pine	70	129	
SpB:										
Sheddenbrook	6D	Slight	Moderate	Moderate	Moderate	Moderate	eastern white pine	60	100	European larch, Norway spruce, eastern white pine
							sugar maple	55	29	
							quaking aspen	---	---	
							American beech	---	---	
SrB:										
Skerry	10A	Slight	Slight	Slight	Moderate	Moderate	sugar maple	50	29	eastern white pine, white spruce
							eastern white pine	55	86	
							white spruce	50	114	
							balsam fir	50	114	
SsB:										
Skerry, very bouldery	10A	Slight	Slight	Slight	Moderate	Moderate	sugar maple	50	29	eastern white pine, white spruce
							eastern white pine	55	86	
							white spruce	50	114	
							balsam fir	50	114	
SsC:										
Skerry, very bouldery	10A	Slight	Slight	Slight	Moderate	Moderate	sugar maple	50	29	eastern white pine, white spruce
							eastern white pine	55	86	
							white spruce	50	114	
							balsam fir	50	114	
StD:										
Success, very bouldery	7X	Moderate	Moderate	Severe	Slight	Slight	eastern white pine	65	114	eastern white pine, red spruce
							paper birch	---	---	
							red spruce	42	86	
							sugar maple	50	29	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Management concerns: Plant competition	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
									cu ft/ac	
SwB:										
Sunapee	3A	Slight	Slight	Slight	Slight	Moderate	sugar maple	50	29	balsam fir, eastern white pine, red pine, white spruce
							red maple	50	29	
							eastern white pine	55	86	
							red spruce	45	100	
							balsam fir	50	114	
SxB:										
Sunapee, very bouldery	3A	Slight	Slight	Slight	Slight	Moderate	sugar maple	50	29	balsam fir, eastern white pine, red pine, white spruce
							red maple	50	29	
							eastern white pine	55	86	
							red spruce	45	100	
							balsam fir	50	114	
Sz:										
Swanton	7W	Slight	Severe	Severe	Severe	Severe	eastern white pine	70	129	eastern white pine, white spruce
							red maple	57	29	
							white spruce	45	100	
							balsam fir	45	100	
TcB:										
Topknot	2W	Slight	Moderate	Moderate	Severe	Severe	red maple	55	29	eastern white pine, white spruce
							eastern white pine	50	86	
							quaking aspen	---	---	
Chazy	3W	Slight	Moderate	Moderate	Severe	Severe	red maple	55	29	balsam fir, eastern white pine
							eastern white pine	55	86	
							eastern arborvitae	---	---	
TnC:										
Tunbridge, very bouldery	3A	Slight	Slight	Slight	Moderate	Slight	sugar maple	65	43	balsam fir, eastern white pine, red spruce, sugar maple
							yellow birch	55	29	
							American beech	65	43	
Lyman, very bouldery	2D	Slight	Slight	Moderate	Severe	Moderate	red spruce	40	86	balsam fir, eastern white pine, white spruce
							red maple	45	14	
							yellow birch	35	14	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Trees to manage
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									cu ft/ac	
TnE:										
Tunbridge, very bouldery	3R	Moderate	Moderate	Slight	Moderate	Slight	sugar maple---------	65	43	balsam fir, eastern white pine, red spruce, sugar maple
							yellow birch--------	55	29	
							American beech------	65	43	
Lyman, very bouldery----	2D	Slight	Slight	Moderate	Severe	Moderate	red spruce----------	40	86	balsam fir, eastern white pine, white spruce
							red maple-----------	45	14	
							yellow birch--------	35	14	
Ud:										
Udipsamments, smoothed--	---	---	---	---	---	---	---	---	---	---
Psammaquents, smoothed--	---	---	---	---	---	---	---	---	---	---
Ue:										
Udipsamments, Mine Spoil, non-acid--------	---	---	---	---	---	---	---	---	---	---
Uf:										
Udorthents, Refuse Substratum-------------	---	---	---	---	---	---	---	---	---	---
Ug:										
Udorthents, smoothed----	---	---	---	---	---	---	---	---	---	---
Uh:										
Udorthents, wet substratum-------------	---	---	---	---	---	---	---	---	---	---
Un:										
Urban Land--------------	---	---	---	---	---	---	---	---	---	---
UpA:										
Urban Land--------------	---	---	---	---	---	---	---	---	---	---
Plainfield--------------	8S	Slight	Slight	Moderate	Slight	Slight	eastern white pine--	70	129	eastern white pine, jack pine, red pine
							red pine------------	55	86	
							quaking aspen-------	---	---	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Management concerns: Plant competition	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
									cu ft/ac	
UpB:										
Urban Land	---	---	---	---	---	---	---	---	---	---
Plainfield	8S	Slight	Slight	Moderate	Slight	Slight	eastern white pine	70	129	eastern white pine, jack pine, red pine
							red pine	55	86	
							quaking aspen	---	---	
W:										
Water, areas < 40 acres	---	---	---	---	---	---	---	---	---	---
WdB:										
Waddington	3F	Slight	Slight	Moderate	Slight	---	sugar maple	60	43	European larch, eastern white pine, red pine
							northern red oak	70	57	
							American basswood	---	---	
							American beech	---	---	
Wn:										
Wainola, high ppt.	6W	Slight	Severe	Moderate	Severe	Severe	red maple	60	43	Norway spruce, eastern white pine, white spruce
							quaking aspen	75	86	
							white ash	68	57	
							paper birch	63	72	
WsB:										
Wallace	6D	Slight	Moderate	Moderate	Slight	Slight	eastern white pine	65	114	eastern white pine, red pine, red spruce
							red pine	55	86	
							balsam fir	---	---	
							paper birch	---	---	
							quaking aspen	---	---	
							sugar maple	---	---	
WsC:										
Wallace	6D	Slight	Moderate	Moderate	Slight	Slight	eastern white pine	65	114	eastern white pine, red pine, red spruce
							red pine	55	86	
							balsam fir	---	---	
							paper birch	---	---	
							quaking aspen	---	---	
							sugar maple	---	---	

Table 7.—Forestland Management and Productivity—Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Trees to manage
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									cu ft/ac	
WsE:										
Wallace	6R	Moderate	Moderate	Moderate	Slight	Slight	eastern white pine	65	114	eastern white pine, red pine, red spruce
							red pine	55	86	
							balsam fir	---	---	
							paper birch	---	---	
							quaking aspen	---	---	
							sugar maple	---	---	
Wu:										
Wonsqueak	2W	Slight	Severe	Severe	Severe	Severe	black spruce	20	29	black spruce, tamarack
							tamarack	---	---	
							eastern arborvitae	---	---	
							balsam fir	---	---	
							quaking aspen	---	---	
							red maple	---	---	

Table 8.—Recreational Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable.)

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
15:					
Loxley, undrained, high ppt.------------------	Severe: excess humus too acid ponding	Severe: excess humus too acid ponding	Severe: excess humus too acid ponding	Severe: excess humus ponding	Severe: excess humus too acid ponding
Beseman, undrained-----	Severe: excess humus ponding	Severe: excess humus too acid ponding	Severe: excess humus too acid ponding	Severe: excess humus ponding	Severe: excess humus too acid ponding
17:					
Beseman, undrained-----	Severe: flooding ponding	Severe: excess humus too acid ponding	Severe: excess humus too acid ponding	Severe: excess humus ponding	Severe: excess humus too acid ponding
Rumney-----------------	Severe: flooding wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
Loxley, undrained------	Severe: excess humus too acid ponding	Severe: excess humus too acid ponding	Severe: excess humus too acid ponding	Severe: excess humus ponding	Severe: excess humus too acid ponding
367:					
Searsport--------------	Severe: excess humus flooding ponding	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding droughty
Borosaprists-----------	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding
Naumburg---------------	Severe: too sandy wetness	Severe: too sandy wetness	Severe: too sandy wetness	Severe: too sandy wetness	Severe: wetness
375C:					
Colton-----------------	Moderate: slope small stones	Moderate: slope small stones	Severe: slope small stones	Slight	Severe: small stones droughty
Adams------------------	Moderate: slope	Moderate: slope	Severe: slope	Slight	Severe: droughty
375F:					
Colton-----------------	Severe: slope	Severe: slope	Severe: slope small stones	Severe: slope	Severe: slope small stones droughty
Adams------------------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope droughty

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
651C:					
Monadnock, very bouldery	Severe: too acid	Severe: too acid	Severe: large stones slope small stones	Moderate: large stones	Severe: large stones too acid
Tunbridge, very bouldery	Moderate: large stones slope	Moderate: large stones slope	Severe: large stones slope small stones	Slight	Moderate: large stones slope small stones depth to rock
Sabattis, undrained; very bouldery	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
651D:					
Monadnock, very bouldery	Severe: slope too acid	Severe: slope too acid	Severe: large stones slope small stones	Moderate: large stones	Severe: large stones slope too acid
Tunbridge, very bouldery	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
653C:					
Monadnock, very bouldery	Severe: too acid	Severe: too acid	Severe: large stones slope small stones	Moderate: large stones	Severe: large stones too acid
654C:					
Monadnock, very bouldery	Severe: too acid	Severe: too acid	Severe: large stones slope small stones	Moderate: large stones	Severe: large stones too acid
Sabattis, very bouldery	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
655B:					
Sunapee, very bouldery	Moderate: slope large stones wetness	Moderate: slope large stones wetness	Severe: slope small stones large stones	Moderate: wetness large stones	Moderate: large stones small stones wetness
Monadnock, very bouldery	Severe: too acid	Severe: too acid	Severe: large stones slope small stones	Moderate: large stones	Severe: large stones too acid

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
661C:					
Hermon, very bouldery--	Moderate: large stones slope	Moderate: large stones slope	Severe: large stones slope small stones	Moderate: large stones	Moderate: slope droughty
661D:					
Hermon, very bouldery--	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
708B:					
Adirondack, very bouldery--------------	Severe: wetness	Moderate: large stones wetness	Severe: large stones small stones wetness	Moderate: wetness	Moderate: large stones small stones wetness
Sabattis, undrained; very bouldery---------	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
Tughill, very bouldery-	Severe: too acid ponding	Severe: too acid ponding	Severe: too acid ponding	Severe: ponding	Severe: too acid ponding
721C:					
Becket, very bouldery--	Moderate: large stones slope	Moderate: large stones slope wetness	Severe: large stones slope small stones	Slight	Moderate: large stones slope small stones
Tunbridge, very bouldery--------------	Moderate: large stones slope	Moderate: large stones slope	Severe: large stones slope small stones	Slight	Moderate: large stones slope small stones depth to rock
Skerry, very bouldery--	Moderate: large stones slope	Moderate: large stones slope wetness	Severe: large stones slope small stones	Moderate: wetness	Moderate: large stones slope droughty
721D:					
Becket, very bouldery--	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
Tunbridge, very bouldery--------------	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
723C:					
Becket, very bouldery--	Moderate: large stones slope	Moderate: large stones slope wetness	Severe: large stones slope small stones	Slight	Moderate: large stones slope small stones

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
723D:					
Becket, very bouldery--	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
725B:					
Skerry, very bouldery--	Moderate: large stones slope	Moderate: large stones slope wetness	Severe: large stones slope small stones	Moderate: wetness	Moderate: large stones small stones droughty
Becket, very bouldery--	Moderate: large stones slope	Moderate: large stones slope wetness	Severe: large stones slope small stones	Slight	Moderate: large stones slope small stones
727B:					
Skerry, very bouldery--	Moderate: large stones small stones	Moderate: large stones wetness	Severe: large stones small stones	Moderate: wetness	Moderate: large stones small stones droughty
Adirondack, very bouldery--------------	Severe: wetness too acid	Moderate: large stones wetness	Severe: large stones small stones wetness	Moderate: wetness	Moderate: large stones small stones wetness
831C:					
Tunbridge, very bouldery--------------	Moderate: large stones slope	Moderate: large stones slope	Severe: large stones slope small stones	Slight	Moderate: large stones slope small stones depth to rock
Lyman, very bouldery---	Severe: depth to rock	Severe: depth to rock	Severe: large stones slope depth to rock	Slight	Severe: depth to rock
831D:					
Tunbridge, very bouldery--------------	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
Lyman, very bouldery---	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope depth to rock	Severe: slope	Severe: slope depth to rock
831F:					
Tunbridge, very bouldery--------------	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Lyman, very bouldery---	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope depth to rock	Severe: slope	Severe: slope depth to rock
861F:					
Lyman, very bouldery---	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope depth to rock	Severe: slope	Severe: slope depth to rock
Ricker, very bouldery--	Severe: excess humus slope depth to rock	Severe: excess humus slope depth to rock	Severe: excess humus slope depth to rock	Severe: excess humus slope fragile	Severe: excess humus slope depth to rock
931C:					
Mundalite, very bouldery--------------	Moderate: large stones slope small stones	Moderate: large stones slope small stones	Severe: large stones slope small stones	Moderate: large stones	Moderate: large stones slope small stones
Rawsonville, very bouldery--------------	Severe: large stones fragile	Severe: large stones fragile	Severe: large stones slope fragile	Severe: erodes easily fragile	Severe: large stones
Worden, very bouldery--	Severe: large stones wetness fragile	Severe: large stones wetness fragile	Severe: large stones slope wetness	Severe: erodes easily wetness fragile	Severe: large stones
931D:					
Mundalite, very bouldery--------------	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
Rawsonville, very bouldery--------------	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: large stones slope
933C:					
Mundalite, very bouldery--------------	Moderate: large stones slope small stones	Moderate: large stones slope small stones	Severe: large stones slope small stones	Moderate: large stones	Moderate: large stones slope small stones
Worden, very bouldery--	Severe: large stones wetness fragile	Severe: large stones wetness fragile	Severe: large stones slope wetness	Severe: erodes easily wetness fragile	Severe: large stones

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
941C:					
Rawsonville, very bouldery	Severe: large stones fragile	Severe: large stones fragile	Severe: large stones slope fragile	Severe: erodes easily fragile	Severe: large stones
Hogback, very bouldery	Severe: depth to rock	Severe: depth to rock	Severe: large stones slope small stones	Severe: erodes easily	Severe: depth to rock
941D:					
Rawsonville, very bouldery	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: large stones slope
Hogback, very bouldery	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope small stones	Severe: erodes easily slope	Severe: slope depth to rock
941F:					
Rawsonville, very bouldery	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: large stones slope
Hogback, very bouldery	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope small stones	Severe: erodes easily slope	Severe: slope depth to rock
943C:					
Rawsonville, very bouldery	Severe: large stones fragile	Severe: large stones fragile	Severe: large stones slope fragile	Severe: erodes easily fragile	Severe: large stones
Borosaprists	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding
Ricker, very bouldery	Severe: excess humus depth to rock	Severe: excess humus depth to rock	Severe: excess humus slope depth to rock	Severe: excess humus fragile	Severe: excess humus depth to rock
945F:					
Hogback, very bouldery	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope small stones	Severe: erodes easily slope	Severe: slope depth to rock
Ricker, very bouldery	Severe: excess humus slope depth to rock	Severe: excess humus slope depth to rock	Severe: excess humus slope depth to rock	Severe: excess humus slope fragile	Severe: excess humus slope depth to rock

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
949F:					
Rock outcrop------------	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock
Ricker, very bouldery--	Severe: excess humus slope depth to rock	Severe: excess humus slope depth to rock	Severe: excess humus slope depth to rock	Severe: excess humus slope fragile	Severe: excess humus slope depth to rock
Hogback, very bouldery-	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope small stones	Severe: erodes easily slope	Severe: slope depth to rock
991D:					
Glebe, very bouldery---	Severe: slope fragile	Severe: slope fragile	Severe: slope fragile	Severe: erodes easily slope fragile	Severe: slope
Skylight, very bouldery	Severe: slope depth to rock	Severe: slope too acid	Severe: large stones slope small stones	Severe: slope	Severe: slope too acid depth to rock
997F:					
Ricker, very bouldery--	Severe: excess humus slope depth to rock	Severe: excess humus slope depth to rock	Severe: excess humus slope depth to rock	Severe: excess humus slope fragile	Severe: excess humus slope depth to rock
Skylight, very bouldery	Severe: slope depth to rock	Severe: slope too acid	Severe: large stones slope small stones	Severe: slope	Severe: slope too acid depth to rock
Rock Outcrop-----------	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock
AbA:					
Adams------------------	Moderate: too sandy	Moderate: too sandy	Moderate: too sandy	Moderate: too sandy	Severe: droughty
AbB:					
Adams------------------	Moderate: too sandy	Moderate: too sandy	Moderate: slope too sandy	Moderate: too sandy	Severe: droughty
AbC:					
Adams------------------	Moderate: slope too sandy	Moderate: slope too sandy	Severe: slope	Moderate: too sandy	Severe: droughty
AbD:					
Adams------------------	Severe: slope	Severe: slope	Severe: slope	Moderate: slope too sandy	Severe: slope droughty
AgB:					
Adirondack-------------	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: small stones wetness

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
AhB: Adirondack, very bouldery	Severe: wetness too acid	Moderate: large stones wetness	Severe: large stones wetness	Moderate: wetness	Moderate: large stones small stones wetness
Ak: Adjidaumo	Severe: percs slowly too clayey wetness	Severe: percs slowly too clayey wetness	Severe: percs slowly too clayey wetness	Severe: too clayey wetness	Severe: too clayey wetness
Am: Adjidaumo, mucky silty clay	Severe: percs slowly ponding	Severe: percs slowly ponding	Severe: percs slowly ponding	Severe: ponding	Severe: ponding
AtA: Amenia	Moderate: wetness	Moderate: wetness	Moderate: small stones wetness	Moderate: wetness	Moderate: wetness
AtB: Amenia	Moderate: wetness	Moderate: wetness	Moderate: slope small stones wetness	Moderate: wetness	Moderate: wetness
AwA: Appleton	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Moderate: wetness
AwB: Appleton	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Moderate: wetness
BcB: Becket	Moderate: percs slowly	Moderate: percs slowly	Moderate: slope	Slight	Moderate: small stones
BeC: Becket, very bouldery	Moderate: large stones slope	Moderate: large stones percs slowly slope	Severe: large stones slope small stones	Slight	Moderate: large stones slope small stones
BeD: Becket, very bouldery	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
BgC: Becket, very bouldery	Moderate: large stones slope	Moderate: large stones percs slowly slope	Severe: large stones slope small stones	Slight	Moderate: large stones slope small stones

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Tunbridge, very bouldery	Moderate: large stones slope	Moderate: large stones slope	Severe: large stones slope small stones	Slight	Moderate: large stones slope small stones
BgE:					
Becket, very bouldery	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
Tunbridge, very bouldery	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
BhC:					
Benson	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Slight	Severe: thin layer
BhE:					
Benson	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope	Severe: slope thin layer
Bo:					
Beseman	Severe: excess humus ponding	Severe: excess humus too acid ponding	Severe: excess humus too acid ponding	Severe: excess humus ponding	Severe: excess humus too acid ponding
BrB:					
Bice	Slight	Slight	Moderate: slope small stones	Slight	Moderate: large stones
BrC:					
Bice	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: large stones slope
BsC:					
Bice, very stony	Moderate: large stones slope	Moderate: large stones slope	Severe: large stones slope small stones	Slight	Moderate: large stones
BvB:					
Bombay	Moderate: wetness	Moderate: wetness	Moderate: slope small stones	Moderate: wetness	Moderate: wetness
Bx:					
Bucksport	Severe: excess humus wetness	Severe: excess humus wetness	Severe: excess humus wetness	Severe: excess humus wetness	Severe: excess humus wetness
CgA:					
Champlain	Severe: too sandy	Severe: too sandy	Severe: too sandy	Severe: too sandy	Severe: droughty

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
CgB:					
Champlain	Severe: too sandy	Severe: too sandy	Severe: too sandy	Severe: too sandy	Severe: droughty
CgC:					
Champlain	Severe: too sandy	Severe: too sandy	Severe: slope too sandy	Severe: too sandy	Severe: droughty
ChF:					
Champlain	Severe: slope too sandy	Severe: slope too sandy	Severe: slope too sandy	Severe: slope too sandy	Severe: slope droughty
Adams	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope droughty
Ck:					
Churubusco	Severe: excess humus ponding depth to rock	Severe: excess humus too acid ponding	Severe: excess humus ponding depth to rock	Severe: excess humus ponding	Severe: too acid ponding depth to rock
ClC:					
Colosse, very stony	Severe: small stones	Severe: small stones	Severe: large stones slope small stones	Moderate: large stones	Severe: small stones
Hermon, very stony	Moderate: large stones slope	Moderate: large stones slope	Severe: large stones slope small stones	Moderate: large stones	Severe: droughty
CmB:					
Colosse	Severe: small stones	Severe: small stones	Severe: small stones	Slight	Severe: small stones
Trout River	Severe: small stones	Severe: small stones	Severe: large stones small stones	Slight	Severe: small stones droughty
CmC:					
Colosse	Severe: small stones	Severe: small stones	Severe: slope small stones	Slight	Severe: small stones
Trout River	Severe: small stones	Severe: small stones	Severe: slope small stones	Slight	Severe: small stones droughty
CnC:					
Colosse, very stony	Severe: small stones	Severe: small stones	Severe: large stones slope small stones	Moderate: large stones	Severe: small stones
Trout River, very stony	Severe: small stones	Severe: small stones	Severe: large stones slope small stones	Moderate: large stones	Severe: small stones droughty

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
CnD:					
Colosse, very stony----	Severe: slope small stones	Severe: slope small stones	Severe: large stones slope small stones	Moderate: large stones slope	Severe: slope small stones
Trout River, very stony	Severe	Severe: slope small stones	Severe: large stones slope small stones	Moderate: large stones slope	Severe: slope small stones droughty
CoA:					
Colton-----------------	Moderate: small stones	Moderate: small stones	Severe: small stones	Slight	Severe: small stones droughty
CoB:					
Colton-----------------	Moderate: small stones	Moderate: small stones	Severe: small stones	Slight	Severe: small stones droughty
CoC:					
Colton-----------------	Moderate: slope small stones	Moderate: slope small stones	Severe: slope small stones	Slight	Severe: small stones droughty
CpC:					
Colton, very stony-----	Moderate: large stones slope	Moderate: large stones slope	Severe: large stones slope small stones	Slight	Severe: small stones too acid droughty
CpE:					
Colton, very stony-----	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: small stones too acid droughty
Crk:					
Cook-------------------	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
Crr:					
Cornish----------------	Severe: flooding wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
Cs:					
Covert-----------------	Moderate: too sandy wetness	Moderate: too sandy wetness	Moderate: too sandy wetness	Moderate: too sandy	Moderate: droughty
CtsA:					
Covertfalls------------	Moderate: percs slowly too sandy wetness	Moderate: percs slowly too sandy wetness	Moderate: too sandy	Moderate: too sandy wetness	Moderate: wetness droughty
CtsB:					
Covertfalls------------	Moderate: percs slowly too sandy wetness	Moderate: percs slowly too sandy wetness	Moderate: slope too sandy	Moderate: too sandy wetness	Moderate: wetness droughty

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
CttB:					
Covertfalls, gravelly--	Moderate: percs slowly small stones too sandy wetness	Moderate: percs slowly small stones too sandy wetness	Severe: small stones	Moderate: too sandy wetness	Severe: small stones
CvA:					
Coveytown--------------	Severe: wetness	Moderate: percs slowly too sandy wetness	Severe: wetness	Moderate: too sandy wetness	Moderate: wetness droughty
CvB:					
Coveytown--------------	Severe: wetness	Moderate: percs slowly too sandy wetness	Severe: wetness	Moderate: too sandy wetness	Moderate: wetness droughty
CwB:					
Coveytown, very stony--	Severe: wetness	Moderate: large stones too sandy wetness	Severe: large stones too sandy wetness	Moderate: too sandy wetness	Moderate: large stones wetness droughty
CxA:					
Croghan----------------	Moderate: wetness	Moderate: wetness	Moderate: wetness	Moderate: wetness	Severe: droughty
CxB:					
Croghan----------------	Moderate: wetness	Moderate: wetness	Moderate: slope wetness	Moderate: wetness	Severe: droughty
DeA:					
Deerfield--------------	Severe: too sandy	Severe: too sandy	Severe: too sandy	Severe: too sandy	Severe: droughty
DeB:					
Deerfield--------------	Severe: too sandy	Severe: too sandy	Severe: too sandy	Severe: too sandy	Severe: droughty
Df:					
Deinache---------------	Severe: too sandy wetness	Severe: too sandy wetness	Severe: too sandy wetness	Severe: too sandy wetness	Severe: wetness
FeB:					
Fahey, loamy substratum	Moderate: small stones wetness	Moderate: small stones wetness	Severe: small stones	Moderate: wetness	Severe: droughty
FhB:					
Fahey, very stony------	Moderate: large stones wetness	Moderate: large stones wetness	Severe: large stones small stones	Moderate: large stones wetness	Severe: large stones droughty
FkB:					
Fernlake---------------	Moderate: small stones too sandy	Moderate: small stones too sandy	Severe: small stones	Moderate: too sandy	Moderate: small stones droughty

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
FlB:					
Fernlake, very bouldery	Moderate: large stones small stones too sandy	Moderate: large stones small stones too sandy	Severe: large stones small stones	Moderate: large stones too sandy	Moderate: small stones droughty
FlC:					
Fernlake, very bouldery	Moderate: large stones slope small stones too sandy	Moderate: large stones slope too sandy	Severe: large stones slope small stones	Moderate: large stones too sandy	Moderate: slope small stones droughty
FlD:					
Fernlake, very bouldery	Severe: slope	Severe: slope	Severe: large stones slope small stones	Moderate: large stones slope too sandy	Severe: slope
FlF:					
Fernlake, very bouldery	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
FmB:					
Flackville-------------	Severe: percs slowly	Severe: percs slowly	Severe: percs slowly	Moderate: too sandy wetness	Moderate: wetness droughty
Fn:					
Fluvaquents, frequently flooded---------------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Fluvaquents, frequently flooded---------------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Udifluvents, frequently flooded---------------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
GfC:					
Gardenisle-------------	Moderate: percs slowly slope	Moderate: percs slowly slope	Severe: slope	Slight	Moderate: slope depth to rock droughty
Benson-----------------	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Slight	Severe: thin layer
Gl:					
Gougeville, undrained--	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
GrA:					
Grattan----------------	Moderate: too sandy	Moderate: too sandy	Moderate: too sandy	Moderate: too sandy	Moderate: droughty

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
GrB:					
Grattan	Moderate: too sandy	Moderate: too sandy	Moderate: slope too sandy	Moderate: too sandy	Moderate: droughty
GvB:					
Grenville	Moderate: percs slowly	Moderate: percs slowly	Moderate: slope small stones	Slight	Slight
GwC:					
Grenville, very stony	Moderate: large stones slope	Moderate: large stones slope	Severe: large stones slope small stones	Slight	Moderate: large stones slope
Ha:					
Hailesboro	Severe: wetness	Moderate: percs slowly wetness	Severe: wetness	Moderate: wetness	Moderate: wetness
HeB:					
Hermon	Slight	Slight	Moderate: slope small stones	Slight	Moderate: droughty
HeC:					
Hermon	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: slope droughty
HfC:					
Hermon, very bouldery	Moderate: large stones slope	Moderate: large stones slope	Severe: large stones slope small stones	Moderate: large stones	Moderate: large stones slope droughty
HfD:					
Hermon, very bouldery	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
HgC:					
Hermon, very bouldery	Moderate: large stones slope	Moderate: large stones slope	Severe: large stones slope small stones	Moderate: large stones	Moderate: large stones slope droughty
Adirondack, very bouldery	Severe: wetness	Moderate: large stones wetness	Severe: large stones small stones	Moderate: wetness	Moderate: large stones wetness
HlB:					
Heuvelton	Moderate: percs slowly wetness	Moderate: percs slowly wetness	Moderate: percs slowly slope wetness	Moderate: wetness	Moderate: wetness
HlD:					
Heuvelton	Severe: slope	Severe: slope	Severe: slope	Severe: erodes easily	Severe: slope

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
HoA:					
Hogansburg	Moderate: percs slowly wetness	Moderate: percs slowly wetness	Moderate: small stones wetness	Moderate: wetness	Moderate: wetness
HoB:					
Hogansburg	Moderate: percs slowly wetness	Moderate: percs slowly wetness	Moderate: slope small stones wetness	Moderate: wetness	Moderate: wetness
HrB:					
Hogansburg, very stony	Moderate: large stones percs slowly wetness	Moderate: large stones percs slowly wetness	Severe: large stones small stones	Moderate: wetness	Moderate: large stones wetness
InB:					
Irona	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Slight	Severe: depth to rock
Conic	Moderate: percs slowly	Moderate: percs slowly	Moderate: slope small stones depth to rock	Slight	Severe: too acid
Jn:					
Junius	Severe: too sandy wetness	Severe: too sandy	Severe: too sandy wetness	Severe: too sandy	Moderate: wetness droughty
KhB:					
Kalurah	Moderate: wetness	Moderate: wetness	Moderate: slope small stones	Moderate: wetness	Moderate: wetness
KlB:					
Kalurah, very stony	Moderate: large stones wetness	Moderate: large stones wetness	Severe: large stones small stones	Moderate: wetness	Moderate: large stones wetness
Kr:					
Kingsbury	Severe: percs slowly wetness	Severe: percs slowly	Severe: percs slowly wetness	Moderate: wetness	Moderate: wetness
Rhinebeck	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: wetness
Ld:					
Lovewell, stratified substratum	Severe: flooding	Moderate: wetness	Moderate: flooding wetness	Moderate: wetness	Moderate: flooding wetness
Le:					
Loxley	Severe: excess humus too acid ponding	Severe: excess humus too acid ponding	Severe: excess humus too acid ponding	Severe: excess humus ponding	Severe: excess humus too acid ponding

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
LtF:					
Lyman, very bouldery---	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope depth to rock	Severe: slope	Severe: slope depth to rock
Tunbridge, very bouldery--------------	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
Rock Outcrop-----------	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock
Lv:					
Lyonmounten, undrained-	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
Ly:					
Lyonmounten, very stony	Severe: wetness	Severe: wetness	Severe: large stones small stones	Severe: wetness	Severe: wetness
MaB:					
Madrid-----------------	Moderate: percs slowly	Moderate: percs slowly	Moderate: percs slowly slope small stones	Slight	Slight
MaC:					
Madrid-----------------	Moderate: percs slowly slope	Moderate: percs slowly slope	Severe: slope	Slight	Moderate: slope
MeA:					
Malone-----------------	Severe: wetness	Moderate: percs slowly wetness	Severe: wetness	Moderate: wetness	Moderate: small stones wetness
MeB:					
Malone-----------------	Severe: wetness	Moderate: percs slowly wetness	Severe: wetness	Moderate: wetness	Moderate: small stones wetness
MfB:					
Malone, very stony-----	Severe: wetness	Moderate: large stones percs slowly wetness	Severe: large stones wetness	Moderate: wetness	Moderate: large stones small stones wetness
Mk:					
Markey-----------------	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding
Mn:					
Massena----------------	Severe: wetness	Moderate: percs slowly wetness	Severe: wetness	Moderate: wetness	Moderate: wetness

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Mp: Medomak, stratified substratum	Severe: flooding wetness	Severe: wetness	Severe: flooding wetness	Severe: wetness	Severe: flooding wetness
Ms: Mino	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: wetness
MtB: Monadnock	Slight	Slight	Moderate: slope small stones	Slight	Slight
MtC: Monadnock	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: slope
MuC: Monadnock, very bouldery	Moderate: large stones slope	Moderate: large stones slope	Severe: large stones slope	Moderate: large stones	Moderate: large stones slope
MuD: Monadnock, very bouldery	Severe: slope	Severe: slope	Severe: large stones slope	Moderate: large stones slope	Severe: large stones slope too acid
MuF: Monadnock, very bouldery	Severe: slope	Severe: slope	Severe: large stones slope	Severe: slope	Severe: large stones slope too acid
MvA: Mooers	Moderate: too sandy wetness	Moderate: too sandy wetness	Moderate: too sandy wetness	Moderate: too sandy wetness	Moderate: wetness droughty
MvB: Mooers	Moderate: too sandy wetness	Moderate: too sandy wetness	Moderate: slope too sandy wetness	Moderate: too sandy wetness	Moderate: wetness droughty
MwA: Muskellunge	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: wetness
MwB: Muskellunge	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: wetness
NeC: Neckrock	Moderate: percs slowly slope	Moderate: percs slowly slope	Severe: slope	Slight	Moderate: slope depth to rock

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Summerville------------	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Slight	Severe: depth to rock
NoB: Nicholville------------	Moderate: wetness	Moderate: wetness	Moderate: slope wetness	Moderate: wetness	Moderate: wetness
NrA: Northway---------------	Severe: wetness	Moderate: percs slowly too sandy wetness	Severe: wetness	Moderate: too sandy wetness	Moderate: wetness droughty
NrB: Northway---------------	Severe: wetness	Moderate: percs slowly too sandy wetness	Severe: wetness	Moderate: too sandy wetness	Moderate: wetness droughty
OcA: Occur------------------	Moderate: percs slowly too sandy wetness	Moderate: percs slowly too sandy wetness	Moderate: small stones too sandy wetness	Moderate: too sandy wetness	Moderate: wetness droughty
OcB: Occur------------------	Moderate: percs slowly too sandy wetness	Moderate: percs slowly too sandy wetness	Moderate: slope small stones too sandy wetness	Moderate: too sandy wetness	Moderate: wetness droughty
OgB: Ogdensburg-------------	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: wetness depth to rock
PeA: Peasleeville-----------	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: wetness
PeB: Peasleeville-----------	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: wetness
PfB: Peasleeville, very stony-----------------	Severe: wetness	Moderate: large stones small stones wetness	Severe: large stones small stones	Moderate: wetness	Moderate: large stones wetness
Pg: Pinconning, undrained--	Severe: percs slowly ponding	Severe: percs slowly ponding	Severe: percs slowly ponding	Severe: ponding	Severe: ponding
Ph: Pipestone--------------	Severe: too sandy wetness	Severe: too sandy	Severe: too sandy wetness	Severe: too sandy	Moderate: wetness droughty

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Pn:					
Pits, Gravel	---	---	---	---	---
Po:					
Pits, Quarry	---	---	---	---	---
Pp:					
Pits, Sand	---	---	---	---	---
PtA:					
Plainfield	Moderate: too sandy	Moderate: too sandy	Moderate: small stones too sandy	Moderate: too sandy	Severe: droughty
PtB:					
Plainfield	Moderate: too sandy	Moderate: too sandy	Moderate: slope small stones	Moderate: too sandy	Severe: droughty
PtC:					
Plainfield	Moderate: slope too sandy	Moderate: slope too sandy	Severe: slope	Moderate: too sandy	Severe: droughty
PvF:					
Plainfield	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope droughty
Grattan	Moderate: too sandy	Moderate: too sandy	Moderate: too sandy	Moderate: too sandy	Moderate: droughty
RoB:					
Rock Outcrop	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Slight	Severe: depth to rock
Ricker	Severe: excess humus depth to rock	Severe: excess humus depth to rock	Severe: excess humus depth to rock	Severe: excess humus fragile	Severe: excess humus depth to rock
Rr:					
Roundabout	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: wetness
Ry:					
Runeberg	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
Sb:					
Sabattis, undrained; very bouldery	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
Se:					
Saprists, ponded	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Aquents, ponded	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
ShB:					
Schroon	Moderate: wetness	Moderate: wetness	Moderate: slope small stones	Moderate: wetness	Moderate: wetness

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
ShC:					
Schroon	Moderate: slope wetness	Moderate: slope wetness	Severe: slope	Moderate: wetness	Moderate: wetness
SkB:					
Schroon, very stony	Moderate: large stones wetness	Moderate: large stones wetness	Severe: large stones	Moderate: wetness	Moderate: large stones wetness
Sn:					
Sciota	Severe: too sandy wetness	Severe: too sandy	Severe: too sandy wetness	Severe: too sandy	Moderate: wetness droughty
So:					
Shaker	Severe: percs slowly wetness	Severe: percs slowly	Severe: percs slowly wetness	Moderate: wetness	Moderate: wetness
SpB:					
Sheddenbrook	Moderate: small stones too sandy wetness	Moderate: small stones too sandy wetness	Severe: small stones	Moderate: wetness	Moderate: large stones small stones droughty
SrB:					
Skerry	Moderate: percs slowly wetness	Moderate: percs slowly wetness	Moderate: percs slowly slope small stones wetness	Moderate: wetness	Moderate: small stones wetness droughty
SsB:					
Skerry, very bouldery	Moderate: large stones percs slowly wetness	Moderate: large stones wetness	Severe: large stones small stones	Moderate: wetness	Moderate: large stones small stones wetness
SsC:					
Skerry, very bouldery	Moderate: large stones slope wetness	Moderate: large stones slope wetness	Severe: large stones slope small stones	Moderate: wetness	Moderate: large stones slope small stones wetness
StD:					
Success, very bouldery	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan large stones slope small stones	Moderate: slope	Severe: cemented pan slope droughty
SwB:					
Sunapee	Moderate: wetness	Moderate: wetness	Moderate: slope small stones	Moderate: wetness	Moderate: wetness
SxB:					
Sunapee, very bouldery	Moderate: large stones wetness	Moderate: large stones wetness	Severe: large stones small stones	Moderate: large stones wetness	Moderate: large stones small stones wetness

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Sz:					
Swanton	Severe: percs slowly wetness	Severe: percs slowly	Severe: percs slowly wetness	Moderate: wetness	Moderate: wetness
TcB:					
Topknot	Severe: wetness depth to rock	Severe: depth to rock	Severe: small stones wetness	Moderate: wetness	Severe: depth to rock
Chazy	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: wetness depth to rock
TnC:					
Tunbridge, very bouldery	Moderate: large stones slope	Moderate: large stones slope	Severe: large stones slope small stones	Slight	Moderate: large stones slope small stones depth to rock
Lyman, very bouldery	Severe: depth to rock	Severe: depth to rock	Severe: large stones slope depth to rock	Slight	Severe: depth to rock
TnE:					
Tunbridge, very bouldery	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
Lyman, very bouldery	Severe: depth to rock	Severe: depth to rock	Severe: large stones slope depth to rock	Slight	Severe: depth to rock
Ud:					
Udipsamments, smoothed	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Psammaquents, smoothed	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Ue:					
Udipsamments, Mine Spoil, non-acid	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Uf:					
Udorthents, Refuse Substratum	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Ug:					
Udorthents, smoothed	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Uh:					
Udorthents, wet substratum	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Un:					
Urban Land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
UpA:					
Urban Land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Plainfield	Moderate: too sandy	Moderate: too sandy	Moderate: small stones too sandy	Moderate: too sandy	Severe: droughty
UpB:					
Urban Land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Plainfield	Moderate: too sandy	Moderate: too sandy	Moderate: small stones too sandy	Moderate: too sandy	Severe: droughty
W:					
Water, areas < 40 acres	---	---	---	---	---
WdB:					
Waddington	Severe: small stones	Severe: small stones	Severe: slope small stones	Slight	Severe: small stones droughty
Wn:					
Wainola, high ppt.	Severe: wetness	Moderate: too sandy wetness	Severe: wetness	Moderate: too sandy wetness	Moderate: wetness droughty
WsB:					
Wallace	Severe: cemented pan too sandy	Severe: cemented pan too sandy	Severe: cemented pan too sandy	Severe: too sandy	Severe: cemented pan droughty
WsC:					
Wallace	Severe: cemented pan too sandy	Severe: cemented pan too sandy	Severe: cemented pan slope too sandy	Severe: too sandy	Severe: cemented pan droughty
WsE:					
Wallace	Severe: cemented pan slope too sandy	Severe: cemented pan slope too sandy	Severe: cemented pan slope too sandy	Severe: slope too sandy	Severe: cemented pan slope droughty
Wu:					
Wonsqueak	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus wetness

Table 9.—Wildlife Habitat

(See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable.)

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
15:										
Loxley, undrained, high ppt.	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Beseman, undrained	Very poor	Poor	Poor	Poor	Poor	Good	Good	Very poor	Very poor	Good
17:										
Beseman, undrained	Very poor	Poor	Poor	Poor	Poor	Good	Good	Very poor	Very poor	Good
Rumney	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
Loxley, undrained	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
367:										
Searsport	Very poor	Poor	Poor	Poor	Poor	Good	Fair	Poor	Poor	Fair
Borosaprists	Very poor	Very poor	Poor	Very poor	Very poor	Good	Good	Very poor	Very poor	Good
Naumburg	Poor	Fair	Fair	Fair	Fair	Poor	Very poor	Fair	Fair	Very poor
375C:										
Colton	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
Adams	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
375F:										
Colton	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Adams	Very poor	Poor	Poor	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
651C:										
Monadnock, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Tunbridge, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Sabattis, undrained; very bouldery	Very poor	Poor	Poor	Poor	Fair	Good	Fair	Poor	Poor	Good
651D:										
Monadnock, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Tunbridge, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
653C:										
Monadnock, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
654C:										
Monadnock, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Sabattis, very bouldery-	Very poor	Poor	Poor	Poor	Fair	Good	Fair	Poor	Poor	Good
655B:										
Sunapee, very bouldery--	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Monadnock, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
661C:										
Hermon, very bouldery---	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
661D:										
Hermon, very bouldery---	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
708B:										
Adirondack, very bouldery---------------	Very poor	Poor	Fair	Fair	Fair	Fair	Very poor	Poor	Fair	Poor
Sabattis, undrained; very bouldery----------	Very poor	Poor	Poor	Poor	Fair	Good	Fair	Poor	Poor	Good
Tughill, very bouldery--	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
721C:										
Becket, very bouldery---	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Tunbridge, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Skerry, very bouldery---	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
721D:										
Becket, very bouldery---	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Tunbridge, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
723C:										
Becket, very bouldery---	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
723D:										
Becket, very bouldery---	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
725B:										
Skerry, very bouldery---	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Becket, very bouldery---	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
727B:										
Skerry, very bouldery---	Very poor	Poor	Good	Fair	Fair	Poor	Very poor	Poor	Fair	Very poor
Adirondack, very bouldery---------------	Very poor	Poor	Fair	Fair	Fair	Fair	Very poor	Poor	Fair	Poor
831C:										
Tunbridge, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Lyman, very bouldery----	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
831D:										
Tunbridge, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Lyman, very bouldery----	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
831F:										
Tunbridge, very bouldery	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
Lyman, very bouldery----	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
861F:										
Lyman, very bouldery----	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Ricker, very bouldery---	Very poor	Very poor	Poor	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor
931C:										
Mundalite, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Rawsonville, very bouldery---------------	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Worden, very bouldery---	Very poor	Poor	Good	Good	Good	Poor	Very poor	Poor	Good	Very poor
931D:										
Mundalite, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Rawsonville, very bouldery---------------	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
933C:										
Mundalite, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Worden, very bouldery---	Very poor	Poor	Good	Good	Good	Poor	Very poor	Poor	Good	Very poor
941C:										
Rawsonville, very bouldery---------------	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Hogback, very bouldery--	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
941D:										
Rawsonville, very bouldery---------------	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Hogback, very bouldery--	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
941F:										
Rawsonville, very bouldery---------------	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Hogback, very bouldery--	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
943C:										
Rawsonville, very bouldery---------------	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Borosaprists------------	Very poor	Very poor	Poor	Very poor	Very poor	Good	Good	Very poor	Very poor	Good
Ricker, very bouldery---	Very poor	Very poor	Poor	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor
945F:										
Hogback, very bouldery--	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Ricker, very bouldery---	Very poor	Very poor	Poor	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor
949F:										
Rock outcrop------------	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
Ricker, very bouldery---	Very poor	Very poor	Poor	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor
Hogback, very bouldery--	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
991D:										
Glebe, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Skylight, very bouldery	Very poor	Very poor	Poor	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
997F:										
Ricker, very bouldery	Very poor	Very poor	Poor	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor
Skylight, very bouldery	Very poor	Poor	Poor	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Rock Outcrop	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
AbA:										
Adams	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
AbB:										
Adams	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
AbC:										
Adams	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
AbD:										
Adams	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
AgB:										
Adirondack	Poor	Poor	Fair	Fair	Fair	Fair	Very poor	Poor	Fair	Poor
AhB:										
Adirondack, very bouldery	Very poor	Poor	Fair	Fair	Fair	Fair	Very poor	Poor	Fair	Poor
Ak:										
Adjidaumo	Poor	Fair	Fair	Fair	Fair	Good	Good	Poor	Fair	Good
Am:										
Adjidaumo, mucky silty clay	Very poor	Poor	Poor	Poor	Poor	Good	Good	Very poor	Poor	Good
AtA:										
Amenia	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
AtB:										
Amenia	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
AwA:										
Appleton	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
AwB:										
Appleton	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
BcB:										
Becket	Fair	Good	Good	Fair	Fair	Poor	Very poor	Good	Fair	Very poor
BeC:										
Becket, very bouldery	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
BeD:										
Becket, very bouldery	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
BgC:										
Becket, very bouldery	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Tunbridge, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
BgE:										
Becket, very bouldery	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Tunbridge, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
BhC:										
Benson	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
BhE:										
Benson	Very poor	Very poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Bo:										
Beseman	Very poor	Poor	Poor	Poor	Poor	Good	Good	Very poor	Poor	Good
BrB:										
Bice	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
BrC:										
Bice	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
BsC:										
Bice, very stony	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
BvB:										
Bombay	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Bx:										
Bucksport	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
CgA:										
Champlain	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
CgB:										
Champlain	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
CgC:										
Champlain	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
ChF:										
Champlain	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Adams	Very poor	Poor	Poor	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Ck:										
Churubusco	Very poor	Poor	Poor	Poor	Poor	Good	Fair	Poor	Poor	Fair
ClC:										
Colosse, very stony	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Hermon, very stony	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
CmB:										
Colosse	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Trout River	Very poor	Poor	Poor	Very poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
CmC:										
Colosse	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Trout River	Very poor	Poor	Poor	Very poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
CnC:										
Colosse, very stony	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Trout River, very stony	Very poor	Poor	Poor	Very poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
CnD:										
Colosse, very stony	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Trout River, very stony	Very poor	Poor	Poor	Very poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
CoA:										
Colton	Very poor	Poor	Poor	Very poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
CoB:										
Colton	Very poor	Poor	Poor	Very poor	Poor	Very poor	Very poor	Poor	Poor	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
CoC: Colton	Very poor	Poor	Poor	Very poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
CpC: Colton, very stony	Very poor	Poor	Poor	Very poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
CpE: Colton, very stony	Very poor	Poor	Poor	Very poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Crk: Cook	Very poor	Poor	Poor	Poor	Poor	Fair	Good	Poor	Poor	Fair
Crr: Cornish	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
Cs: Covert	Poor	Fair	Fair	Good	Good	Poor	Poor	Poor	Good	Poor
CtsA: Covertfalls	Poor	Fair	Good	Fair	Fair	Poor	Poor	Fair	Fair	Poor
CtsB: Covertfalls	Poor	Fair	Good	Fair	Fair	Poor	Very poor	Fair	Fair	Very poor
CttB: Covertfalls, gravelly	Poor	Fair	Good	Fair	Fair	Poor	Very poor	Fair	Fair	Very poor
CvA: Coveytown	Poor	Fair	Fair	Poor	Poor	Fair	Fair	Fair	Poor	Fair
CvB: Coveytown	Poor	Fair	Fair	Poor	Poor	Poor	Very poor	Fair	Poor	Very poor
CwB: Coveytown, very stony	Very poor	Poor	Fair	Poor	Poor	Poor	Very poor	Poor	Poor	Very poor
CxA: Croghan	Poor	Fair	Fair	Poor	Poor	Poor	Poor	Fair	Poor	Poor
CxB: Croghan	Poor	Fair	Fair	Poor	Poor	Poor	Very poor	Fair	Poor	Very poor
DeA: Deerfield	Poor	Fair	Fair	Poor	Poor	Poor	Poor	Fair	Poor	Poor
DeB: Deerfield	Poor	Fair	Fair	Poor	Poor	Poor	Very poor	Fair	Poor	Very poor
Df: Deinache	Poor	Fair	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
FeB:										
Fahey, loamy substratum	Very poor	Poor	Poor	Poor	Very poor	Poor	Very poor	Poor	Poor	Very poor
FhB:										
Fahey, very stony	Very poor	Poor	Poor	Very poor	Poor	Poor	Very poor	Poor	Poor	Very poor
FkB:										
Fernlake	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
FlB:										
Fernlake, very bouldery	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
FlC:										
Fernlake, very bouldery	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
FlD:										
Fernlake, very bouldery	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
FlF:										
Fernlake, very bouldery	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Fair	Very poor
FmB:										
Flackville	Fair	Fair	Good	Good	Good	Poor	Very poor	Fair	Good	Very poor
Fn:										
Fluvaquents, frequently flooded	Very poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Poor	Good
Fluvaquents, frequently flooded	Very poor	Poor	Fair	Fair	Fair	Fair	Fair	Poor	Fair	Fair
Udifluvents, frequently flooded	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
GfC:										
Gardenisle	Fair	Good	Good	Fair	Fair	Very poor	Very poor	Good	Good	Very poor
Benson	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Gl:										
Gougeville, undrained	Poor	Fair	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair
GrA:										
Grattan	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
GrB:										
Grattan	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
GvB:										
Grenville	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
GwC:										
Grenville, very stony	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Ha:										
Hailesboro	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
HeB:										
Hermon	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
HeC:										
Hermon	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
HfC:										
Hermon, very bouldery	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
HfD:										
Hermon, very bouldery	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
HgC:										
Hermon, very bouldery	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Adirondack, very bouldery	Very poor	Poor	Fair	Fair	Fair	Fair	Very poor	Poor	Fair	Poor
HlB:										
Heuvelton	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
HlD:										
Heuvelton	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
HoA:										
Hogansburg	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
HoB:										
Hogansburg	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
HrB:										
Hogansburg, very stony	Very poor	Poor	Good	Good	Good	Poor	Very poor	Poor	Good	Very poor
InB:										
Irona	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Conic	Poor	Fair	Good	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Jn:										
Junius	Poor	Fair	Fair	Poor	Poor	Fair	Poor	Fair	Poor	Poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
KhB:										
Kalurah------------------	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Poor
KlB:										
Kalurah, very stony-----	Very poor	Poor	Good	Good	Good	Poor	Very poor	Poor	Good	Very poor
Kr:										
Kingsbury---------------	Fair	Good	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair
Rhinebeck---------------	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
Ld:										
Lovewell, stratified substratum-------------	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Le:										
Loxley------------------	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
LtF:										
Lyman, very bouldery----	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Tunbridge, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
Rock Outcrop------------	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
Lv:										
Lyonmounten, undrained--	Poor	Fair	Fair	Poor	Fair	Good	Fair	Fair	Fair	Fair
Ly:										
Lyonmounten, very stony-	Very poor	Poor	Fair	Poor	Fair	Good	Fair	Poor	Poor	Fair
MaB:										
Madrid------------------	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
MaC:										
Madrid------------------	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
MeA:										
Malone------------------	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
MeB:										
Malone------------------	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
MfB:										
Malone, very stony------	Very poor	Poor	Good	Good	Good	Poor	Very poor	Poor	Good	Very poor
Mk:										
Markey------------------	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
Mn:										
Massena	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
Mp:										
Medomak, stratified substratum	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Ms:										
Mino	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
MtB:										
Monadnock	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
MtC:										
Monadnock	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
MuC:										
Monadnock, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
MuD:										
Monadnock, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
MuF:										
Monadnock, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
MvA:										
Mooers	Poor	Fair	Good	Fair	Fair	Poor	Poor	Fair	Fair	Poor
MvB:										
Mooers	Poor	Fair	Good	Fair	Fair	Poor	Very poor	Fair	Fair	Very poor
MwA:										
Muskellunge	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
MwB:										
Muskellunge	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
NeC:										
Neckrock	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Summerville	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
NoB:										
Nicholville	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
NrA:										
Northway	Poor	Fair	Good	Fair	Fair	Fair	Poor	Fair	Fair	Poor
NrB:										
Northway	Poor	Fair	Good	Fair	Fair	Poor	Very poor	Fair	Fair	Very poor
OcA:										
Occur	Poor	Fair	Good	Fair	Fair	Poor	Poor	Fair	Fair	Poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
OcB:										
Occur	Poor	Fair	Good	Fair	Fair	Poor	Very poor	Fair	Fair	Very poor
OgB:										
Ogdensburg	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
PeA:										
Peasleeville	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
PeB:										
Peasleeville	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
PfB:										
Peasleeville, very stony	Very poor	Poor	Good	Good	Good	Poor	Very poor	Poor	Good	Very poor
Pg:										
Pinconning, undrained	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good
Ph:										
Pipestone	Poor	Fair	Fair	Fair	Fair	Poor	Very poor	Fair	Fair	Poor
Pn:										
Pits, Gravel	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
Po:										
Pits, Quarry	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
Pp:										
Pits, Sand	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
PtA:										
Plainfield	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
PtB:										
Plainfield	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
PtC:										
Plainfield	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
PvF:										
Plainfield	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Grattan	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
RoB:										
Rock Outcrop	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
Ricker	Very poor	Very poor	Poor	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
Rr:										
Roundabout	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
Ry:										
Runeberg	Very poor	Poor	Fair	Poor	Fair	Good	Good	Poor	Poor	Good
Sb:										
Sabattis, undrained; very bouldery	Very poor	Poor	Poor	Poor	Fair	Good	Fair	Poor	Poor	Good
Se:										
Saprists, ponded	Very poor	Very poor	Very poor	Very poor	Very poor	Good	Good	Very poor	Very poor	Good
Aquents, ponded	Very poor	Very poor	Very poor	Very poor	Very poor	Good	Good	Very poor	Very poor	Good
ShB:										
Schroon	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
ShC:										
Schroon	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
SkB:										
Schroon, very stony	Very poor	Poor	Good	Good	Good	Poor	Very poor	Poor	Good	Very poor
Sn:										
Sciota	Poor	Fair	Good	Fair	Fair	Fair	Fair	Fair	Fair	Fair
So:										
Shaker	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
SpB:										
Sheddenbrook	Poor	Fair	Fair	Poor	Poor	Poor	Very poor	Fair	Poor	Very poor
SrB:										
Skerry	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
SsB:										
Skerry, very bouldery	Very poor	Poor	Good	Fair	Fair	Poor	Very poor	Poor	Fair	Very poor
SsC:										
Skerry, very bouldery	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
StD:										
Success, very bouldery	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
SwB:										
Sunapee	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
SxB:										
Sunapee, very bouldery	Very poor	Poor	Good	Good	Good	Poor	Very poor	Poor	Good	Very poor
Sz:										
Swanton	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
TcB:										
Topknot	Very poor	Poor	Poor	Poor	Poor	Fair	Poor	Poor	Poor	Poor
Chazy	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
TnC:										
Tunbridge, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
Lyman, very bouldery	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
TnE:										
Tunbridge, very bouldery	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
Lyman, very bouldery	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Ud:										
Udipsamments, smoothed	---	---	---	---	---	---	---	---	---	---
Psammaquents, smoothed	---	---	---	---	---	---	---	---	---	---
Ue:										
Udipsamments, Mine Spoil, non-acid	---	---	---	---	---	---	---	---	---	---
Uf:										
Udorthents, Refuse Substratum	---	---	---	---	---	---	---	---	---	---
Ug:										
Udorthents, smoothed	Very poor	Very poor	Poor	Very poor	Very poor	Very poor	Very poor	Poor	Very poor	Very poor
Uh:										
Udorthents, wet substratum	Very poor	Very poor	Poor	Very poor	Very poor	Poor	Poor	Poor	Very poor	Very poor
Un:										
Urban Land	---	---	---	---	---	---	---	---	---	---
UpA:										
Urban Land	---	---	---	---	---	---	---	---	---	---
Plainfield	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
UpB:										
Urban Land	---	---	---	---	---	---	---	---	---	---
Plainfield	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
W:										
Water, areas < 40 acres-	---	---	---	---	---	---	---	---	---	---
WdB:										
Waddington--------------	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Wn:										
Wainola, high ppt.------	Poor	Fair	Good	Fair	Fair	Fair	Fair	Fair	Fair	Fair
WsB:										
Wallace-----------------	Very poor	Poor	Poor	Very poor	Poor	Poor	Very poor	Poor	Poor	Very poor
WsC:										
Wallace-----------------	Very poor	Poor	Poor	Very poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
WsE:										
Wallace-----------------	Very poor	Poor	Poor	Very poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Wu:										
Wonsqueak---------------	Very poor	Poor	Poor	Poor	Poor	Good	Good	Very poor	Poor	Good

Table 10.—Building Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable.)

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
15:						
Loxley, undrained, high ppt.-------------------	Severe: excess humus ponding	Severe: low strength subsides ponding	Severe: low strength subsides ponding	Severe: low strength subsides ponding	Severe: frost action subsides ponding	Severe: excess humus too acid ponding
Beseman, undrained------	Severe: excess humus ponding	Severe: low strength ponding	Severe: ponding	Severe: low strength ponding	Severe: frost action ponding	Severe: excess humus too acid ponding
17:						
Beseman, undrained------	Severe: excess humus ponding	Severe: flooding low strength ponding	Severe: flooding ponding	Severe: flooding low strength ponding	Severe: frost action ponding	Severe: excess humus too acid ponding
Rumney------------------	Severe: wetness cutbanks cave	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding frost action wetness	Severe: wetness
Loxley, undrained-------	Severe: excess humus ponding	Severe: low strength subsides ponding	Severe: low strength subsides ponding	Severe: low strength subsides ponding	Severe: frost action subsides ponding	Severe: excess humus too acid ponding
367:						
Searsport---------------	Severe: ponding cutbanks cave	Severe: flooding ponding	Severe: flooding ponding	Severe: flooding ponding	Severe: ponding	Severe: excess humus ponding droughty
Borosaprists------------	Severe: excess humus ponding	Severe: low strength subsides ponding	Severe: low strength subsides ponding	Severe: low strength subsides ponding	Severe: frost action subsides ponding	Severe: excess humus ponding

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Naumburg	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
375C: Colton	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Severe: small stones droughty
Adams	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Severe: droughty
375F: Colton	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
Adams	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope droughty
651C: Monadnock, very bouldery	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Severe: large stones too acid
Tunbridge, very bouldery	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Moderate: large stones slope small stones depth to rock
Sabattis, undrained; very bouldery	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action wetness	Severe: wetness
651D: Monadnock, very bouldery	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: large stones slope too acid

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Tunbridge, very bouldery	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope
653C:						
Monadnock, very bouldery	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Severe: large stones too acid
654C:						
Monadnock, very bouldery	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Severe: large stones too acid
Sabattis, very bouldery-	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action wetness	Severe: wetness
655B:						
Sunapee, very bouldery--	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Moderate: frost action slope wetness	Moderate: large stones small stones wetness
Monadnock, very bouldery	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Severe: large stones too acid
661C:						
Hermon, very bouldery---	Severe: cutbanks cave	Moderate: large stones slope	Moderate: large stones slope	Severe: slope	Moderate: large stones slope	Moderate: slope droughty
661D:						
Hermon, very bouldery---	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
708B:						
Adirondack, very bouldery---------------	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: large stones small stones wetness

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Sabattis, undrained; very bouldery----------	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action wetness	Severe: wetness
Tughill, very bouldery--	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding	Severe: frost action ponding	Severe: too acid ponding
721C:						
Becket, very bouldery---	Severe: wetness cutbanks cave	Moderate: slope wetness	Severe: wetness	Severe: slope	Moderate: frost action slope wetness	Moderate: large stones slope small stones
Tunbridge, very bouldery	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Moderate: large stones slope small stones depth to rock
Skerry, very bouldery---	Severe: wetness cutbanks cave	Moderate: slope wetness	Severe: wetness	Severe: slope	Severe: frost action	Moderate: large stones slope droughty
721D:						
Becket, very bouldery---	Severe: slope wetness cutbanks cave	Severe: slope	Severe: slope wetness	Severe: slope	Severe: slope	Severe: slope
Tunbridge, very bouldery	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope
723C:						
Becket, very bouldery---	Severe: wetness cutbanks cave	Moderate: slope wetness	Severe: wetness	Severe: slope	Moderate: frost action slope wetness	Moderate: large stones slope small stones

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
723D:						
Becket, very bouldery---	Severe: slope wetness cutbanks cave	Severe: slope	Severe: slope wetness	Severe: slope	Severe: slope	Severe: slope
725B:						
Skerry, very bouldery---	Severe: wetness cutbanks cave	Moderate: slope wetness	Severe: wetness	Severe: slope	Severe: frost action	Moderate: large stones small stones droughty
Becket, very bouldery---	Severe: wetness cutbanks cave	Moderate: slope wetness	Severe: wetness	Severe: slope	Moderate: frost action slope wetness	Moderate: large stones slope small stones
727B:						
Skerry, very bouldery---	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Severe: frost action	Moderate: large stones small stones droughty
Adirondack, very bouldery---------------	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: large stones small stones wetness
831C:						
Tunbridge, very bouldery	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Moderate: large stones slope small stones depth to rock
Lyman, very bouldery----	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock
831D:						
Tunbridge, very bouldery	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Lyman, very bouldery----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
831F:						
Tunbridge, very bouldery	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope
Lyman, very bouldery----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
861F:						
Lyman, very bouldery----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
Ricker, very bouldery---	Severe: excess humus slope depth to rock	Severe: low strength slope depth to rock	Severe: slope depth to rock	Severe: low strength slope depth to rock	Severe: slope depth to rock	Severe: excess humus slope depth to rock
931C:						
Mundalite, very bouldery	Severe: cutbanks cave	Moderate: slope	Moderate: slope wetness	Severe: slope	Moderate: frost action slope	Moderate: large stones slope small stones
Rawsonville, very bouldery---------------	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Severe: frost action slope depth to rock	Severe: large stones
Worden, very bouldery---	Severe: wetness	Severe: wetness	Severe: wetness	Severe: slope wetness	Severe: frost action	Severe: large stones
931D:						
Mundalite, very bouldery	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Rawsonville, very bouldery	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: large stones slope
933C:						
Mundalite, very bouldery	Severe: cutbanks cave	Moderate: slope	Moderate: slope wetness	Severe: slope	Moderate: frost action slope	Moderate: large stones slope small stones
Worden, very bouldery	Severe: wetness	Severe: wetness	Severe: wetness	Severe: slope wetness	Severe: frost action	Severe: large stones
941C:						
Rawsonville, very bouldery	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Severe: large stones
Hogback, very bouldery	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock
941D:						
Rawsonville, very bouldery	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: large stones slope
Hogback, very bouldery	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
941F:						
Rawsonville, very bouldery	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: large stones slope

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Hogback, very bouldery--	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
943C:						
Rawsonville, very bouldery---------------	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Severe: large stones
Borosaprists------------	Severe: excess humus ponding	Severe: low strength subsides ponding	Severe: low strength subsides ponding	Severe: low strength subsides ponding	Severe: frost action subsides ponding	Severe: excess humus ponding
Ricker, very bouldery---	Severe: excess humus depth to rock	Severe: low strength depth to rock	Severe: depth to rock	Severe: low strength slope depth to rock	Severe: depth to rock	Severe: excess humus depth to rock
945F:						
Hogback, very bouldery--	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
Ricker, very bouldery---	Severe: excess humus slope depth to rock	Severe: low strength slope depth to rock	Severe: slope depth to rock	Severe: low strength slope depth to rock	Severe: slope depth to rock	Severe: excess humus slope depth to rock
949F:						
Rock outcrop-------------	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
Ricker, very bouldery---	Severe: excess humus slope depth to rock	Severe: low strength slope depth to rock	Severe: slope depth to rock	Severe: low strength slope depth to rock	Severe: slope depth to rock	Severe: excess humus slope depth to rock

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Hogback, very bouldery--	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
991D:						
Glebe, very bouldery----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: frost action slope	Severe: slope
Skylight, very bouldery-	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope too acid depth to rock
997F:						
Ricker, very bouldery---	Severe: excess humus slope depth to rock	Severe: low strength slope depth to rock	Severe: slope depth to rock	Severe: low strength slope depth to rock	Severe: slope depth to rock	Severe: excess humus slope depth to rock
Skylight, very bouldery-	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope too acid depth to rock
Rock Outcrop------------	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
AbA:						
Adams-------------------	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: droughty
AbB:						
Adams-------------------	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: droughty
AbC:						
Adams-------------------	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Severe: droughty

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
AbD:						
Adams	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope droughty
AgB:						
Adirondack	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: small stones wetness
AhB:						
Adirondack, very bouldery	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: large stones small stones wetness
Ak:						
Adjidaumo	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action low strength wetness	Severe: too clayey wetness
Am:						
Adjidaumo, mucky silty clay	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding	Severe: frost action low strength ponding	Severe: ponding
AtA:						
Amenia	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: frost action wetness	Moderate: wetness
AtB:						
Amenia	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Moderate: frost action wetness	Moderate: wetness
AwA:						
Appleton	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: wetness

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
AwB:						
Appleton----------------	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: wetness
BcB:						
Becket------------------	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Moderate: frost action wetness	Moderate: small stones
BeC:						
Becket, very bouldery---	Severe: wetness cutbanks cave	Moderate: slope wetness	Severe: wetness	Severe: slope	Moderate: frost action slope wetness	Moderate: large stones slope small stones
BeD:						
Becket, very bouldery---	Severe: slope wetness cutbanks cave	Severe: slope	Severe: slope wetness	Severe: slope	Severe: slope	Severe: slope
BgC:						
Becket, very bouldery---	Severe: wetness cutbanks cave	Moderate: slope wetness	Severe: wetness	Severe: slope	Moderate: frost action slope wetness	Moderate: large stones slope small stones
Tunbridge, very bouldery	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Moderate: large stones slope small stones
BgE:						
Becket, very bouldery---	Severe: slope wetness cutbanks cave	Severe: slope	Severe: slope wetness	Severe: slope	Severe: slope	Severe: slope
Tunbridge, very bouldery	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
BhC:						
Benson	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: thin layer
BhE:						
Benson	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope thin layer
Bo:						
Beseman	Severe: excess humus ponding	Severe: low strength ponding	Severe: ponding	Severe: low strength ponding	Severe: frost action ponding	Severe: excess humus too acid ponding
BrB:						
Bice	Slight	Slight	Slight	Moderate: slope	Slight	Moderate: large stones
BrC:						
Bice	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Moderate: large stones slope
BsC:						
Bice, very stony	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Moderate: large stones
BvB:						
Bombay	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Moderate: frost action wetness	Moderate: wetness
Bx:						
Bucksport	Severe: excess humus wetness	Severe: low strength wetness	Severe: low strength wetness	Severe: low strength wetness	Severe: frost action wetness	Severe: excess humus wetness
CgA:						
Champlain	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: droughty

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
CgB:						
Champlain	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: droughty
CgC:						
Champlain	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Severe: droughty
ChF:						
Champlain	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope droughty
Adams	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope droughty
Ck:						
Churubusco	Severe: ponding depth to rock	Severe: ponding depth to rock	Severe: ponding depth to rock	Severe: ponding depth to rock	Severe: frost action ponding depth to rock	Severe: too acid ponding depth to rock
ClC:						
Colosse, very stony	Severe: cutbanks cave	Moderate: large stones slope	Moderate: large stones slope	Severe: slope	Moderate: large stones slope	Severe: small stones
Hermon, very stony	Severe: cutbanks cave	Moderate: large stones slope	Moderate: large stones slope	Severe: slope	Moderate: large stones slope	Severe: droughty
CmB:						
Colosse	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones slope	Moderate: large stones	Severe: small stones
Trout River	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones slope	Moderate: large stones	Severe: small stones droughty

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
CmC:						
Colosse	Severe: cutbanks cave	Moderate: slope	Moderate: large stones slope	Severe: slope	Moderate: large stones slope	Severe: small stones
Trout River	Severe: cutbanks cave	Moderate: large stones slope	Moderate: large stones slope	Severe: slope	Moderate: large stones slope	Severe: small stones droughty
CnC:						
Colosse, very stony	Severe: cutbanks cave	Moderate: large stones slope	Moderate: large stones slope	Severe: slope	Moderate: large stones slope	Severe: small stones
Trout River, very stony	Severe: cutbanks cave	Moderate: large stones slope	Moderate: large stones slope	Severe: slope	Moderate: large stones slope	Severe: small stones droughty
CnD:						
Colosse, very stony	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones
Trout River, very stony	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
CoA:						
Colton	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: small stones droughty
CoB:						
Colton	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: small stones droughty
CoC:						
Colton	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Severe: small stones droughty

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
CpC:						
Colton, very stony------	Severe: cutbanks cave	Moderate: large stones slope	Moderate: large stones slope	Severe: slope	Moderate: large stones slope	Severe: small stones too acid droughty
CpE:						
Colton, very stony------	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones too acid droughty
Crk:						
Cook--------------------	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
Crr:						
Cornish-----------------	Severe: wetness cutbanks cave	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding frost action wetness	Severe: wetness
Cs:						
Covert------------------	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: wetness	Moderate: droughty
CtsA:						
Covertfalls-------------	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: frost action wetness	Moderate: wetness droughty
CtsB:						
Covertfalls-------------	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Moderate: frost action wetness	Moderate: wetness droughty
CttB:						
Covertfalls, gravelly---	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Moderate: frost action wetness	Severe: small stones

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
CvA:						
Coveytown	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Moderate: frost action wetness	Moderate: wetness droughty
CvB:						
Coveytown	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Moderate: frost action wetness	Moderate: wetness droughty
CwB:						
Coveytown, very stony	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Moderate: frost action wetness	Moderate: large stones wetness droughty
CxA:						
Croghan	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: frost action wetness	Severe: droughty
CxB:						
Croghan	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Moderate: frost action wetness	Severe: droughty
DeA:						
Deerfield	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: frost action wetness	Severe: droughty
DeB:						
Deerfield	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Moderate: frost action wetness	Severe: droughty
Df:						
Deinache	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
FeB:						
Fahey, loamy substratum-	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: large stones slope wetness	Moderate: large stones wetness	Severe: droughty
FhB:						
Fahey, very stony-------	Severe: wetness cutbanks cave	Moderate: large stones wetness	Severe: wetness	Moderate: large stones slope wetness	Moderate: large stones wetness	Severe: large stones droughty
FkB:						
Fernlake----------------	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: small stones droughty
FlB:						
Fernlake, very bouldery-	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: small stones droughty
FlC:						
Fernlake, very bouldery-	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Moderate: slope small stones droughty
FlD:						
Fernlake, very bouldery-	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
FlF:						
Fernlake, very bouldery-	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
FmB:						
Flackville--------------	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Moderate: frost action shrink-swell wetness	Moderate: wetness droughty

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Fn:						
Fluvaquents, frequently flooded	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Fluvaquents, frequently flooded	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Udifluvents, frequently flooded	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
GfC:						
Gardenisle	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Moderate: slope depth to rock droughty
Benson	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: thin layer
Gl:						
Gougeville, undrained	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
GrA:						
Grattan	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: droughty
GrB:						
Grattan	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: droughty
GvB:						
Grenville	Moderate: dense layer	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
GwC:						
Grenville, very stony	Moderate: slope dense layer	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: large stones slope

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Ha:						
Hailesboro	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: wetness
HeB:						
Hermon	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones slope	Moderate: large stones	Moderate: droughty
HeC:						
Hermon	Severe: cutbanks cave	Moderate: large stones slope	Moderate: large stones slope	Severe: slope	Moderate: large stones slope	Moderate: slope droughty
HfC:						
Hermon, very bouldery	Severe: cutbanks cave	Moderate: large stones slope	Moderate: large stones slope	Severe: slope	Moderate: large stones slope	Moderate: large stones slope droughty
HfD:						
Hermon, very bouldery	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
HgC:						
Hermon, very bouldery	Severe: cutbanks cave	Moderate: large stones slope	Moderate: large stones slope	Severe: slope	Moderate: large stones slope	Moderate: large stones slope droughty
Adirondack, very bouldery	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: large stones wetness
HlB:						
Heuvelton	Severe: wetness	Moderate: shrink-swell wetness	Severe: wetness	Moderate: shrink-swell slope wetness	Severe: frost action low strength	Moderate: wetness

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
HlD:						
Heuvelton	Severe: slope wetness	Severe: slope	Severe: slope wetness	Severe: slope	Severe: frost action low strength slope	Severe: slope
HoA:						
Hogansburg	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: wetness	Severe: frost action	Moderate: wetness
HoB:						
Hogansburg	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Severe: frost action	Moderate: wetness
HrB:						
Hogansburg, very stony	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Severe: frost action	Moderate: large stones wetness
InB:						
Irona	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock
Conic	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Severe: too acid
Jn:						
Junius	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Moderate: frost action wetness	Moderate: wetness droughty
KhB:						
Kalurah	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Severe: frost action	Moderate: wetness
KlB:						
Kalurah, very stony	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Severe: frost action	Moderate: large stones wetness

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Kr:						
Kingsbury	Severe: wetness	Severe: shrink-swell wetness	Severe: shrink-swell wetness	Severe: shrink-swell wetness	Severe: frost action low strength	Moderate: wetness
Rhinebeck	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action low strength	Moderate: wetness
Ld:						
Lovewell, stratified substratum	Severe: wetness cutbanks cave	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: flooding frost action	Moderate: flooding wetness
Le:						
Loxley	Severe: excess humus ponding	Severe: low strength subsides ponding	Severe: low strength subsides ponding	Severe: low strength subsides ponding	Severe: frost action subsides ponding	Severe: excess humus too acid ponding
LtF:						
Lyman, very bouldery	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
Tunbridge, very bouldery	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope
Rock Outcrop	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
Lv:						
Lyonmounten, undrained	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action wetness	Severe: wetness
Ly:						
Lyonmounten, very stony	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action wetness	Severe: wetness

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
MaB:						
Madrid	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
MaC:						
Madrid	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: slope
MeA:						
Malone	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: small stones wetness
MeB:						
Malone	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: small stones wetness
MfB:						
Malone, very stony	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: large stones small stones wetness
Mk:						
Markey	Severe: excess humus ponding cutbanks cave	Severe: low strength subsides ponding	Severe: subsides ponding	Severe: low strength subsides ponding	Severe: frost action subsides ponding	Severe: excess humus ponding
Mn:						
Massena	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: wetness
Mp:						
Medomak, stratified substratum	Severe: wetness cutbanks cave	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding frost action wetness	Severe: flooding wetness

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Ms:						
Mino	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: wetness
MtB:						
Monadnock	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Slight
MtC:						
Monadnock	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Moderate: slope
MuC:						
Monadnock, very bouldery	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Moderate: large stones slope
MuD:						
Monadnock, very bouldery	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: large stones slope too acid
MuF:						
Monadnock, very bouldery	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: large stones slope too acid
MvA:						
Mooers	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: wetness	Moderate: wetness droughty
MvB:						
Mooers	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Moderate: wetness	Moderate: wetness droughty
MwA:						
Muskellunge	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action low strength	Moderate: wetness

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
MwB:						
Muskellunge	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action low strength	Moderate: wetness
NeC:						
Neckrock	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: slope depth to rock	Moderate: slope depth to rock
Summerville	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock
NoB:						
Nicholville	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Severe: frost action	Moderate: wetness
NrA:						
Northway	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Moderate: frost action wetness	Moderate: wetness droughty
NrB:						
Northway	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Moderate: frost action wetness	Moderate: wetness droughty
OcA:						
Occur	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: frost action wetness	Moderate: wetness droughty
OcB:						
Occur	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Moderate: frost action wetness	Moderate: wetness droughty
OgB:						
Ogdensburg	Severe: wetness depth to rock	Severe: wetness	Severe: wetness depth to rock	Severe: wetness	Severe: frost action	Moderate: wetness depth to rock

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
PeA:						
Peasleeville------------	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: wetness
PeB:						
Peasleeville------------	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: wetness
PfB:						
Peasleeville, very stony	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: large stones wetness
Pg:						
Pinconning, undrained---	Severe: ponding cutbanks cave	Severe: ponding	Severe: shrink-swell ponding	Severe: ponding	Severe: shrink-swell ponding	Severe: ponding
Ph:						
Pipestone---------------	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Moderate: frost action wetness	Moderate: wetness droughty
Pn:						
Pits, Gravel------------	---	---	---	---	---	---
Po:						
Pits, Quarry------------	---	---	---	---	---	---
Pp:						
Pits, Sand--------------	---	---	---	---	---	---
PtA:						
Plainfield--------------	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: droughty
PtB:						
Plainfield--------------	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: droughty
PtC:						
Plainfield--------------	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Severe: droughty

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
PvF:						
Plainfield	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope droughty
Grattan	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: droughty
RoB:						
Rock Outcrop	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock
Ricker	Severe: excess humus depth to rock	Severe: low strength depth to rock	Severe: depth to rock	Severe: low strength depth to rock	Severe: depth to rock	Severe: excess humus depth to rock
Rr:						
Roundabout	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: wetness
Ry:						
Runeberg	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action wetness	Severe: wetness
Sb:						
Sabattis, undrained; very bouldery	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action wetness	Severe: wetness
Se:						
Saprists, ponded	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Aquents, ponded	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
ShB:						
Schroon	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Severe: frost action	Moderate: wetness

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
ShC:						
Schroon	Severe: wetness	Moderate: slope wetness	Severe: wetness	Severe: slope	Severe: frost action	Moderate: wetness
SkB:						
Schroon, very stony	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Severe: frost action	Moderate: large stones wetness
Sn:						
Sciota	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Moderate: frost action wetness	Moderate: wetness droughty
So:						
Shaker	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: wetness
SpB:						
Sheddenbrook	Severe: wetness cutbanks cave depth to rock	Moderate: wetness depth to rock	Severe: wetness depth to rock	Moderate: slope wetness depth to rock	Moderate: wetness depth to rock	Moderate: large stones small stones droughty
SrB:						
Skerry	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Severe: frost action	Moderate: small stones wetness droughty
SsB:						
Skerry, very bouldery	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Severe: frost action	Moderate: large stones small stones wetness
SsC:						
Skerry, very bouldery	Severe: wetness	Moderate: slope wetness	Severe: wetness	Severe: slope	Severe: frost action	Moderate: large stones slope small stones wetness

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
StD:						
Success, very bouldery--	Severe: cemented pan slope cutbanks cave	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope droughty
SwB:						
Sunapee----------------	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Moderate: frost action wetness	Moderate: wetness
SxB:						
Sunapee, very bouldery--	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Moderate: frost action wetness	Moderate: large stones small stones wetness
Sz:						
Swanton----------------	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: wetness
TcB:						
Topknot----------------	Severe: wetness depth to rock	Severe: wetness depth to rock	Severe: wetness depth to rock	Severe: wetness depth to rock	Severe: frost action depth to rock	Severe: depth to rock
Chazy------------------	Severe: wetness depth to rock	Severe: wetness	Severe: wetness depth to rock	Severe: wetness	Severe: frost action	Moderate: wetness depth to rock
TnC:						
Tunbridge, very bouldery	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Moderate: large stones slope small stones depth to rock
Lyman, very bouldery----	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
TnE:						
Tunbridge, very bouldery	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope
Lyman, very bouldery----	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock
Ud:						
Udipsamments, smoothed--	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Psammaquents, smoothed--	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Ue:						
Udipsamments, Mine Spoil, non-acid--------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Uf:						
Udorthents, Refuse Substratum-------------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Ug:						
Udorthents, smoothed----	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Uh:						
Udorthents, wet substratum-------------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Un:						
Urban Land--------------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
UpA:						
Urban Land--------------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Plainfield	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: droughty
UpB:						
Urban Land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Plainfield	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: droughty
W:						
Water, areas < 40 acres	---	---	---	---	---	---
WdB:						
Waddington	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Severe: small stones droughty
Wn:						
Wainola, high ppt.	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Moderate: frost action wetness	Moderate: wetness droughty
WsB:						
Wallace	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan droughty
WsC:						
Wallace	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan droughty
WsE:						
Wallace	Severe: cemented pan slope cutbanks cave	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope droughty
Wu:						
Wonsqueak	Severe: excess humus wetness	Severe: low strength wetness	Severe: wetness	Severe: low strength wetness	Severe: frost action wetness	Severe: excess humus wetness

Table 11.—Sanitary Facilities

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable.)

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
15:					
Loxley, undrained, high ppt.	Severe: percs slowly subsides ponding	Severe: excess humus seepage ponding	Severe: excess humus seepage ponding	Severe: seepage ponding	Poor: excess humus too acid ponding
Beseman, undrained	Severe: percs slowly ponding	Severe: excess humus seepage ponding	Severe: excess humus too acid ponding	Severe: seepage ponding	Poor: excess humus too acid ponding
17:					
Beseman, undrained	Severe: percs slowly ponding	Severe: excess humus seepage ponding	Severe: excess humus too acid ponding	Severe: seepage ponding	Poor: excess humus too acid ponding
Rumney	Severe: flooding wetness poor filter	Severe: flooding seepage wetness	Severe: flooding seepage wetness	Severe: flooding seepage wetness	Poor: seepage small stones too sandy
Loxley, undrained	Severe: percs slowly subsides ponding	Severe: excess humus seepage ponding	Severe: excess humus seepage ponding	Severe: seepage ponding	Poor: excess humus too acid ponding
367:					
Searsport	Severe: ponding poor filter	Severe: excess humus seepage ponding	Severe: seepage too sandy ponding	Severe: seepage ponding	Poor: seepage too sandy ponding
Borosaprists	Severe: percs slowly subsides ponding	Severe: excess humus seepage ponding	Severe: excess humus seepage ponding	Severe: seepage ponding	Poor: excess humus ponding
Naumburg	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: seepage too sandy wetness
375C:					
Colton	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
Adams	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
375F:					
Colton	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage small stones too sandy
Adams	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage slope too sandy
651C:					
Monadnock, very bouldery	Moderate: slope	Severe: seepage slope	Severe: seepage too acid	Severe: seepage	Poor: seepage small stones
Tunbridge, very bouldery	Severe: depth to rock	Severe: seepage slope depth to rock	Severe: seepage depth to rock	Severe: seepage depth to rock	Poor: depth to rock
Sabattis, undrained; very bouldery	Severe: percs slowly wetness	Severe: seepage wetness	Severe: seepage wetness	Severe: seepage wetness	Poor: small stones wetness
651D:					
Monadnock, very bouldery	Severe: slope	Severe: seepage slope	Severe: seepage slope too acid	Severe: seepage slope	Poor: seepage slope small stones
Tunbridge, very bouldery	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: slope depth to rock
653C:					
Monadnock, very bouldery	Moderate: slope	Severe: seepage slope	Severe: seepage too acid	Severe: seepage	Poor: seepage small stones
654C:					
Monadnock, very bouldery	Moderate: slope	Severe: seepage slope	Severe: seepage too acid	Severe: seepage	Poor: seepage small stones
Sabattis, very bouldery	Severe: percs slowly wetness	Severe: seepage wetness	Severe: seepage wetness	Severe: seepage wetness	Poor: small stones wetness
655B:					
Sunapee, very bouldery	Severe: wetness	Severe: seepage slope wetness	Severe: seepage wetness	Severe: seepage wetness	Fair: slope small stones wetness

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Monadnock, very bouldery	Moderate: slope	Severe: seepage slope	Severe: seepage too acid	Severe: seepage	Poor: seepage small stones
661C:					
Hermon, very bouldery	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
661D:					
Hermon, very bouldery	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage small stones too sandy
708B:					
Adirondack, very bouldery	Severe: percs slowly wetness	Moderate: large stones seepage slope	Severe: wetness too acid	Severe: wetness	Poor: small stones wetness
Sabattis, undrained; very bouldery	Severe: percs slowly wetness	Severe: seepage wetness	Severe: seepage wetness	Severe: seepage wetness	Poor: small stones wetness
Tughill, very bouldery	Severe: percs slowly ponding	Severe: ponding	Severe: large stones too acid ponding	Severe: ponding	Poor: small stones ponding
721C:					
Becket, very bouldery	Severe: percs slowly wetness	Severe: slope wetness	Moderate: slope too sandy wetness	Moderate: slope wetness	Poor: seepage small stones
Tunbridge, very bouldery	Severe: depth to rock	Severe: seepage slope depth to rock	Severe: seepage depth to rock	Severe: seepage depth to rock	Poor: depth to rock
Skerry, very bouldery	Severe: percs slowly wetness	Severe: slope wetness	Severe: wetness	Moderate: slope wetness	Poor: seepage small stones
721D:					
Becket, very bouldery	Severe: percs slowly slope wetness	Severe: slope wetness	Severe: slope	Severe: slope	Poor: seepage slope small stones
Tunbridge, very bouldery	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: slope depth to rock

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
723C:					
Becket, very bouldery--	Severe: percs slowly wetness	Severe: slope wetness	Moderate: slope too sandy wetness	Moderate: slope wetness	Poor: seepage small stones
723D:					
Becket, very bouldery--	Severe: percs slowly slope wetness	Severe: slope wetness	Severe: slope	Severe: slope	Poor: seepage slope small stones
725B:					
Skerry, very bouldery--	Severe: percs slowly wetness	Severe: slope wetness	Severe: wetness	Moderate: slope wetness	Poor: seepage small stones
Becket, very bouldery--	Severe: percs slowly wetness	Severe: slope wetness	Moderate: slope too sandy wetness	Moderate: slope wetness	Poor: seepage small stones
727B:					
Skerry, very bouldery--	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Moderate: wetness	Poor: seepage small stones
Adirondack, very bouldery--------------	Severe: percs slowly wetness	Moderate: large stones seepage slope	Severe: wetness too acid	Severe: wetness	Poor: small stones wetness
831C:					
Tunbridge, very bouldery--------------	Severe: depth to rock	Severe: seepage slope depth to rock	Severe: seepage depth to rock	Severe: seepage depth to rock	Poor: depth to rock
Lyman, very bouldery---	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: seepage depth to rock	Poor: depth to rock
831D:					
Tunbridge, very bouldery--------------	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: slope depth to rock
Lyman, very bouldery---	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: seepage slope depth to rock	Poor: slope depth to rock
831F:					
Tunbridge, very bouldery--------------	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: slope depth to rock

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Lyman, very bouldery---	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: seepage slope depth to rock	Poor: slope depth to rock
861F:					
Lyman, very bouldery---	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: seepage slope depth to rock	Poor: slope depth to rock
Ricker, very bouldery--	Severe: slope depth to rock	Severe: excess humus slope depth to rock	Severe: excess humus slope depth to rock	Severe: slope depth to rock	Poor: area reclaim excess humus slope depth to rock
931C:					
Mundalite, very bouldery--------------	Severe: percs slowly wetness	Severe: slope wetness	Moderate: slope too sandy wetness	Moderate: slope wetness	Poor: seepage small stones
Rawsonville, very bouldery--------------	Severe: depth to rock	Severe: seepage slope depth to rock	Severe: seepage depth to rock	Severe: seepage depth to rock	Poor: area reclaim small stones depth to rock
Worden, very bouldery--	Severe: percs slowly wetness	Severe: slope wetness	Severe: wetness	Severe: wetness	Poor: wetness
931D:					
Mundalite, very bouldery--------------	Severe: percs slowly slope wetness	Severe: slope wetness	Severe: slope	Severe: slope	Poor: seepage slope small stones
Rawsonville, very bouldery--------------	Severe: depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim slope small stones depth to rock
933C:					
Mundalite, very bouldery--------------	Severe: percs slowly wetness	Severe: slope wetness	Moderate: slope too sandy wetness	Moderate: slope wetness	Poor: seepage small stones
Worden, very bouldery--	Severe: percs slowly wetness	Severe: slope wetness	Severe: wetness	Severe: wetness	Poor: wetness

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
941C:					
Rawsonville, very bouldery	Severe: depth to rock	Severe: seepage slope depth to rock	Severe: seepage depth to rock	Severe: seepage depth to rock	Poor: area reclaim small stones depth to rock
Hogback, very bouldery	Severe: depth to rock	Severe: seepage slope depth to rock	Severe: seepage depth to rock	Severe: depth to rock	Poor: depth to rock
941D:					
Rawsonville, very bouldery	Severe: depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim slope small stones depth to rock
Hogback, very bouldery	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock
941F:					
Rawsonville, very bouldery	Severe: depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim slope small stones depth to rock
Hogback, very bouldery	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock
943C:					
Rawsonville, very bouldery	Severe: depth to rock	Severe: seepage slope depth to rock	Severe: seepage depth to rock	Severe: seepage depth to rock	Poor: area reclaim small stones depth to rock
Borosaprists	Severe: percs slowly subsides ponding	Severe: excess humus seepage wetness	Severe: excess humus seepage ponding	Severe: seepage ponding	Poor: excess humus ponding
Ricker, very bouldery	Severe: depth to rock	Severe: excess humus slope depth to rock	Severe: excess humus depth to rock	Severe: depth to rock	Poor: area reclaim excess humus depth to rock
945F:					
Hogback, very bouldery	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Ricker, very bouldery--	Severe: slope depth to rock	Severe: excess humus slope depth to rock	Severe: excess humus slope depth to rock	Severe: slope depth to rock	Poor: area reclaim excess humus slope depth to rock
949F:					
Rock outcrop-----------	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock
Ricker, very bouldery--	Severe: slope depth to rock	Severe: excess humus slope depth to rock	Severe: excess humus slope depth to rock	Severe: slope depth to rock	Poor: area reclaim excess humus slope depth to rock
Hogback, very bouldery-	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock
991D:					
Glebe, very bouldery---	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim slope depth to rock
Skylight, very bouldery	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: slope depth to rock	Poor: seepage too sandy depth to rock
997F:					
Ricker, very bouldery--	Severe: slope depth to rock	Severe: excess humus slope depth to rock	Severe: excess humus slope depth to rock	Severe: slope depth to rock	Poor: area reclaim excess humus slope depth to rock
Skylight, very bouldery	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: slope depth to rock	Poor: seepage too sandy depth to rock
Rock Outcrop-----------	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock
AbA:					
Adams------------------	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy
AbB:					
Adams------------------	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy
AbC:					
Adams------------------	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
AbD:					
Adams------------------	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage slope too sandy
AgB:					
Adirondack-------------	Severe: percs slowly wetness	Moderate: large stones seepage slope	Severe: wetness	Severe: wetness	Poor: small stones wetness
AhB:					
Adirondack, very bouldery--------------	Severe: percs slowly wetness	Moderate: large stones seepage slope	Severe: wetness too acid	Severe: wetness	Poor: small stones wetness
Ak:					
Adjidaumo--------------	Severe: percs slowly wetness	Slight	Severe: too clayey wetness	Severe: wetness	Poor: hard to pack too clayey wetness
Am:					
Adjidaumo, mucky silty clay------------------	Severe: percs slowly ponding	Severe: ponding	Severe: too clayey ponding	Severe: ponding	Poor: hard to pack too clayey ponding
AtA:					
Amenia-----------------	Severe: percs slowly wetness	Moderate: seepage	Severe: wetness	Moderate: wetness	Fair: small stones wetness
AtB:					
Amenia-----------------	Severe: percs slowly wetness	Moderate: seepage slope	Severe: wetness	Moderate: wetness	Fair: small stones wetness
AwA:					
Appleton---------------	Severe: percs slowly wetness	Slight	Severe: wetness	Severe: wetness	Poor: wetness
AwB:					
Appleton---------------	Severe: percs slowly wetness	Moderate: slope	Severe: wetness	Severe: wetness	Poor: wetness
BcB:					
Becket-----------------	Severe: percs slowly wetness	Moderate: seepage slope	Moderate: wetness	Moderate: wetness	Poor: seepage
BeC:					
Becket, very bouldery--	Severe: percs slowly wetness	Severe: slope wetness	Moderate: slope too sandy wetness	Moderate: slope wetness	Poor: seepage small stones

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
BeD:					
Becket, very bouldery--	Severe: percs slowly slope wetness	Severe: slope wetness	Severe: slope	Severe: slope	Poor: seepage slope small stones
BgC:					
Becket, very bouldery--	Severe: percs slowly wetness	Severe: slope wetness	Moderate: slope too sandy wetness	Moderate: slope wetness	Poor: seepage small stones
Tunbridge, very bouldery--------------	Severe: depth to rock	Severe: seepage slope depth to rock	Severe: seepage depth to rock	Severe: seepage depth to rock	Poor: depth to rock
BgE:					
Becket, very bouldery--	Severe: percs slowly slope wetness	Severe: slope wetness	Severe: slope	Severe: slope	Poor: seepage slope small stones
Tunbridge, very bouldery--------------	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: slope depth to rock
BhC:					
Benson-----------------	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock	Poor: area reclaim small stones depth to rock
BhE:					
Benson-----------------	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Poor: area reclaim slope small stones depth to rock
Bo:					
Beseman----------------	Severe: percs slowly ponding	Severe: excess humus seepage ponding	Severe: excess humus too acid ponding	Severe: seepage ponding	Poor: excess humus too acid ponding
BrB:					
Bice-------------------	Moderate: percs slowly	Severe: seepage	Severe: seepage	Severe: seepage	Poor: small stones
BrC:					
Bice-------------------	Moderate: percs slowly slope	Severe: seepage slope	Severe: seepage	Severe: seepage	Poor: small stones
BsC:					
Bice, very stony-------	Moderate: percs slowly slope	Severe: seepage slope	Severe: seepage	Severe: seepage	Poor: small stones

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
BvB:					
Bombay	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Moderate: wetness	Fair: small stones wetness
Bx:					
Bucksport	Severe: percs slowly wetness	Severe: excess humus seepage	Severe: seepage wetness	Severe: seepage wetness	Poor: excess humus wetness
CgA:					
Champlain	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy
CgB:					
Champlain	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy
CgC:					
Champlain	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy
ChF:					
Champlain	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage slope too sandy
Adams	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage slope too sandy
Ck:					
Churubusco	Severe: ponding depth to rock	Severe: excess humus seepage depth to rock	Severe: seepage ponding depth to rock	Severe: seepage ponding depth to rock	Poor: ponding depth to rock
ClC:					
Colosse, very stony	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
Hermon, very stony	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
CmB:					
Colosse	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
Trout River	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
CmC:					
Colosse----------------	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
Trout River------------	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
CnC:					
Colosse, very stony----	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
Trout River, very stony	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
CnD:					
Colosse, very stony----	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage slope small stones too sandy
Trout River, very stony	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage slope small stones too sandy
CoA:					
Colton-----------------	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
CoB:					
Colton-----------------	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
CoC:					
Colton-----------------	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
CpC:					
Colton, very stony-----	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
CpE:					
Colton, very stony	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage slope small stones too sandy
Crk:					
Cook	Severe: percs slowly wetness	Severe: seepage wetness	Severe: wetness	Severe: seepage wetness	Poor: small stones wetness
Crr:					
Cornish	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Poor: wetness
Cs:					
Covert	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: seepage too sandy
CtsA:					
Covertfalls	Severe: percs slowly wetness	Severe: seepage wetness	Severe: wetness	Severe: seepage	Moderate: wetness
CtsB:					
Covertfalls	Severe: percs slowly wetness	Severe: seepage wetness	Severe: wetness	Severe: seepage	Moderate: wetness
CttB:					
Covertfalls, gravelly	Severe: percs slowly wetness	Severe: seepage wetness	Severe: wetness	Severe: seepage	Poor: small stones
CvA:					
Coveytown	Severe: percs slowly wetness	Severe: seepage wetness	Severe: wetness	Severe: seepage wetness	Poor: small stones wetness
CvB:					
Coveytown	Severe: percs slowly wetness	Severe: seepage wetness	Severe: wetness	Severe: seepage wetness	Poor: small stones wetness
CwB:					
Coveytown, very stony	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: wetness
CxA:					
Croghan	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: seepage too sandy

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
CxB:					
Croghan	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: seepage too sandy
DeA:					
Deerfield	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: seepage too sandy
DeB:					
Deerfield	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: seepage too sandy
Df:					
Deinache	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: too sandy wetness
FeB:					
Fahey, loamy substratum	Severe: wetness poor filter	Severe: seepage wetness	Severe: too sandy wetness	Severe: seepage wetness	Poor: seepage small stones too sandy
FhB:					
Fahey, very stony	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: seepage small stones too sandy
FkB:					
Fernlake	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
FlB:					
Fernlake, very bouldery	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
FlC:					
Fernlake, very bouldery	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
FlD:					
Fernlake, very bouldery	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage small stones too sandy

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
FlF:					
Fernlake, very bouldery	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage small stones too sandy
FmB:					
Flackville-------------	Severe: percs slowly wetness	Severe: seepage	Severe: too clayey wetness	Severe: seepage	Poor: too clayey
Fn:					
Fluvaquents, frequently flooded---------------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Fluvaquents, frequently flooded---------------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Udifluvents, frequently flooded---------------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
GfC:					
Gardenisle-------------	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock	Poor: small stones depth to rock
Benson-----------------	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock	Poor: area reclaim small stones depth to rock
Gl:					
Gougeville, undrained--	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: too sandy wetness
GrA:					
Grattan----------------	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy
GrB:					
Grattan----------------	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy
GvB:					
Grenville--------------	Severe: percs slowly	Moderate: seepage slope	Slight	Slight	Fair: small stones
GwC:					
Grenville, very stony--	Severe: percs slowly	Severe: slope	Moderate: slope	Moderate: slope	Fair: slope small stones

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Ha:					
Hailesboro	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: wetness
HeB:					
Hermon	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
HeC:					
Hermon	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
HfC:					
Hermon, very bouldery	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
HfD:					
Hermon, very bouldery	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage small stones too sandy
HgC:					
Hermon, very bouldery	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
Adirondack, very bouldery	Severe: percs slowly wetness	Moderate: large stones seepage slope	Severe: wetness too acid	Severe: wetness	Poor: small stones wetness
HlB:					
Heuvelton	Severe: percs slowly wetness	Moderate: slope	Severe: too clayey wetness	Moderate: wetness	Poor: too clayey
HlD:					
Heuvelton	Severe: percs slowly slope wetness	Severe: slope	Severe: slope too clayey wetness	Severe: slope	Poor: slope too clayey
HoA:					
Hogansburg	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Moderate: wetness	Fair: small stones
HoB:					
Hogansburg	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Moderate: wetness	Fair: small stones

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
HrB:					
Hogansburg, very stony-	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Moderate: wetness	Fair: small stones
InB:					
Irona------------------	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Poor: depth to rock
Conic------------------	Severe: percs slowly depth to rock	Severe: slope depth to rock	Severe: too acid depth to rock	Severe: depth to rock	Poor: depth to rock
Jn:					
Junius-----------------	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: too sandy wetness
KhB:					
Kalurah----------------	Severe: percs slowly wetness	Moderate: slope	Severe: wetness	Moderate: wetness	Fair: small stones wetness
KlB:					
Kalurah, very stony----	Severe: percs slowly wetness	Moderate: slope	Severe: wetness	Moderate: wetness	Fair: small stones wetness
Kr:					
Kingsbury--------------	Severe: percs slowly wetness	Slight	Severe: too clayey wetness	Severe: wetness	Poor: hard to pack too clayey wetness
Rhinebeck--------------	Severe: percs slowly wetness	Slight	Severe: too clayey wetness	Severe: wetness	Poor: too clayey wetness
Ld:					
Lovewell, stratified substratum------------	Severe: flooding wetness	Severe: flooding seepage wetness	Severe: flooding seepage wetness	Severe: flooding wetness	Fair: thin layer wetness
Le:					
Loxley-----------------	Severe: percs slowly subsides ponding	Severe: excess humus seepage ponding	Severe: excess humus seepage ponding	Severe: seepage ponding	Poor: excess humus too acid ponding
LtF:					
Lyman, very bouldery---	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: seepage slope depth to rock	Poor: slope depth to rock
Tunbridge, very bouldery--------------	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: slope depth to rock

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
LtF:					
Rock Outcrop	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock
Lv:					
Lyonmounten, undrained	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: small stones wetness
Ly:					
Lyonmounten, very stony	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: small stones wetness
MaB:					
Madrid	Severe: percs slowly	Moderate: seepage slope	Slight	Slight	Fair: small stones
MaC:					
Madrid	Severe: percs slowly	Severe: slope	Moderate: slope	Moderate: slope	Fair: slope small stones
MeA:					
Malone	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: wetness
MeB:					
Malone	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: wetness
MfB:					
Malone, very stony	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: wetness
Mk:					
Markey	Severe: percs slowly subsides ponding	Severe: excess humus seepage ponding	Severe: seepage too sandy ponding	Severe: seepage ponding	Poor: seepage too sandy ponding
Mn:					
Massena	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: wetness
Mp:					
Medomak, stratified substratum	Severe: flooding wetness poor filter	Severe: flooding seepage wetness	Severe: flooding seepage wetness	Severe: flooding wetness	Poor: ponding
Ms:					
Mino	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: wetness

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
MtB:					
Monadnock	Slight	Severe: seepage	Severe: seepage	Severe: seepage	Poor: seepage
MtC:					
Monadnock	Moderate: slope	Severe: seepage slope	Severe: seepage	Severe: seepage	Poor: seepage
MuC:					
Monadnock, very bouldery	Moderate: slope	Severe: seepage slope	Severe: seepage too acid	Severe: seepage	Poor: seepage
MuD:					
Monadnock, very bouldery	Severe: slope	Severe: seepage slope	Severe: seepage slope too acid	Severe: seepage slope	Poor: seepage slope
MuF:					
Monadnock, very bouldery	Severe: slope	Severe: seepage slope	Severe: seepage slope too acid	Severe: seepage slope	Poor: seepage slope
MvA:					
Mooers	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: seepage too sandy
MvB:					
Mooers	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: seepage too sandy
MwA:					
Muskellunge	Severe: percs slowly wetness	Slight	Severe: too clayey wetness	Severe: wetness	Poor: hard to pack too clayey wetness
MwB:					
Muskellunge	Severe: percs slowly wetness	Slight	Severe: too clayey wetness	Severe: wetness	Poor: hard to pack too clayey wetness
NeC:					
Neckrock	Severe: percs slowly depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock	Poor: depth to rock
Summerville	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock	Poor: depth to rock

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
NoB: Nicholville	Severe: wetness	Severe: wetness	Severe: wetness	Moderate: wetness	Fair: wetness
NrA: Northway	Severe: percs slowly wetness	Severe: seepage wetness	Severe: wetness	Severe: seepage wetness	Poor: wetness
NrB: Northway	Severe: percs slowly wetness	Severe: seepage wetness	Severe: wetness	Severe: seepage wetness	Poor: wetness
OcA: Occur	Severe: percs slowly wetness	Severe: seepage wetness	Severe: wetness	Severe: seepage	Poor: small stones
OcB: Occur	Severe: percs slowly wetness	Severe: seepage wetness	Severe: wetness	Severe: seepage	Poor: small stones
OgB: Ogdensburg	Severe: wetness depth to rock	Severe: seepage depth to rock	Severe: seepage wetness depth to rock	Severe: seepage wetness depth to rock	Poor: small stones wetness depth to rock
PeA: Peasleeville	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: small stones wetness
PeB: Peasleeville	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: small stones wetness
PfB: Peasleeville, very stony	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: small stones wetness
Pg: Pinconning, undrained	Severe: percs slowly ponding poor filter	Severe: seepage ponding	Severe: too clayey ponding	Severe: seepage ponding	Poor: hard to pack too clayey ponding
Ph: Pipestone	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: seepage too sandy wetness
Pn: Pits, Gravel	---	---	---	---	---
Po: Pits, Quarry	---	---	---	---	---

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Pp:					
Pits, Sand	---	---	---	---	---
PtA:					
Plainfield	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy
PtB:					
Plainfield	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy
PtC:					
Plainfield	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy
PvF:					
Plainfield	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage slope too sandy
Grattan	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy
RoB:					
Rock Outcrop	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Poor: depth to rock
Ricker	Severe: depth to rock	Severe: excess humus depth to rock	Severe: excess humus depth to rock	Severe: depth to rock	Poor: area reclaim excess humus depth to rock
Rr:					
Roundabout	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: wetness
Ry:					
Runeberg	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: wetness
Sb:					
Sabattis, undrained; very bouldery	Severe: percs slowly wetness	Severe: seepage wetness	Severe: seepage wetness	Severe: seepage wetness	Poor: small stones wetness
Se:					
Saprists, ponded	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Aquents, ponded	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
ShB:					
Schroon	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Fair: small stones wetness
ShC:					
Schroon	Severe: wetness	Severe: slope wetness	Severe: wetness	Severe: wetness	Fair: small stones wetness
SkB:					
Schroon, very stony	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Fair: small stones wetness
Sn:					
Sciota	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: too sandy wetness
So:					
Shaker	Severe: percs slowly wetness	Severe: seepage	Severe: too clayey wetness	Severe: seepage wetness	Poor: too clayey wetness
SpB:					
Sheddenbrook	Severe: wetness poor filter depth to rock	Severe: seepage depth to rock	Severe: seepage wetness depth to rock	Severe: seepage wetness depth to rock	Poor: seepage too sandy depth to rock
SrB:					
Skerry	Severe: percs slowly wetness	Moderate: seepage slope	Severe: wetness	Moderate: wetness	Poor: seepage
SsB:					
Skerry, very bouldery	Severe: percs slowly wetness	Moderate: seepage slope	Severe: wetness	Moderate: wetness	Poor: seepage small stones
SsC:					
Skerry, very bouldery	Severe: percs slowly wetness	Severe: slope	Severe: wetness	Moderate: slope wetness	Poor: seepage small stones
StD:					
Success, very bouldery	Severe: cemented pan slope poor filter	Severe: cemented pan seepage slope	Severe: seepage slope too sandy	Severe: cemented pan seepage slope	Poor: cemented pan seepage too sandy
SwB:					
Sunapee	Severe: wetness	Severe: seepage wetness	Severe: seepage wetness	Severe: seepage wetness	Fair: small stones wetness
SxB:					
Sunapee, very bouldery	Severe: wetness	Severe: seepage wetness	Severe: seepage wetness	Severe: seepage wetness	Fair: small stones wetness

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Sz:					
Swanton	Severe: percs slowly wetness	Severe: seepage	Severe: too clayey wetness	Severe: seepage wetness	Poor: hard to pack too clayey wetness
TcB:					
Topknot	Severe: wetness depth to rock	Severe: wetness depth to rock	Severe: wetness depth to rock	Severe: wetness depth to rock	Poor: wetness depth to rock
Chazy	Severe: wetness depth to rock	Severe: wetness depth to rock	Severe: wetness depth to rock	Severe: wetness depth to rock	Poor: wetness depth to rock
TnC:					
Tunbridge, very bouldery	Severe: depth to rock	Severe: seepage slope depth to rock	Severe: seepage depth to rock	Severe: seepage depth to rock	Poor: depth to rock
Lyman, very bouldery	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: seepage depth to rock	Poor: depth to rock
TnE:					
Tunbridge, very bouldery	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: slope depth to rock
Lyman, very bouldery	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: seepage depth to rock	Poor: depth to rock
Ud:					
Udipsamments, smoothed	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Psammaquents, smoothed	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Ue:					
Udipsamments, Mine Spoil, non-acid	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Uf:					
Udorthents, Refuse Substratum	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Ug:					
Udorthents, smoothed	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Uh:					
Udorthents, wet substratum	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Un:					
Urban Land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
UpA:					
Urban Land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Plainfield	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy
UpB:					
Urban Land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Plainfield	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy
W:					
Water, areas < 40 acres	---	---	---	---	---
WdB:					
Waddington	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
Wn:					
Wainola, high ppt.	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: too sandy wetness
WsB:					
Wallace	Severe: cemented pan poor filter	Severe: cemented pan seepage	Severe: seepage too sandy	Severe: cemented pan seepage	Poor: cemented pan seepage too sandy
WsC:					
Wallace	Severe: cemented pan poor filter	Severe: cemented pan seepage slope	Severe: seepage too sandy	Severe: cemented pan seepage	Poor: cemented pan seepage too sandy
WsE:					
Wallace	Severe: cemented pan slope poor filter	Severe: cemented pan seepage slope	Severe: seepage slope too sandy	Severe: cemented pan seepage slope	Poor: cemented pan seepage slope too sandy
Wu:					
Wonsqueak	Severe: percs slowly ponding	Severe: excess humus seepage wetness	Severe: wetness	Severe: seepage wetness	Poor: wetness

Table 12.—Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable.)

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
15:				
Loxley, undrained, high ppt.	Poor: low strength wetness	Improbable: excess humus	Improbable: excess humus	Poor: excess humus wetness too acid
Beseman, undrained	Poor: wetness	Improbable: excess humus	Improbable: excess humus	Poor: excess humus wetness too acid
17:				
Beseman, undrained	Poor: wetness	Improbable: excess humus	Improbable: excess humus	Poor: excess humus wetness too acid
Rumney	Poor: wetness	Probable	Probable	Poor: area reclaim small stones wetness
Loxley, undrained	Poor: low strength wetness	Improbable: excess humus	Improbable: excess humus	Poor: excess humus wetness too acid
367:				
Searsport	Poor: wetness	Probable	Probable	Poor: area reclaim too sandy wetness
Borosaprists	Poor: wetness	Improbable: excess humus	Improbable: excess humus	Poor: excess humus wetness
Naumburg	Poor: wetness	Probable	Improbable: too sandy	Poor: too sandy wetness
375C:				
Colton	Good	Probable	Probable	Poor: small stones too sandy
Adams	Good	Probable	Improbable: too sandy	Poor: too sandy
375F:				
Colton	Poor: slope	Probable	Probable	Poor: slope small stones too sandy
Adams	Poor: slope	Probable	Improbable: too sandy	Poor: slope too sandy

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
651C:				
Monadnock, very bouldery	Good	Probable	Probable	Poor: area reclaim small stones too acid
Tunbridge, very bouldery	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Sabattis, undrained; very bouldery----------	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
651D:				
Monadnock, very bouldery	Poor: slope	Probable	Probable	Poor: area reclaim small stones too acid
Tunbridge, very bouldery	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
653C:				
Monadnock, very bouldery	Good	Probable	Probable	Poor: area reclaim small stones too acid
654C:				
Monadnock, very bouldery	Good	Probable	Probable	Poor: area reclaim small stones too acid
Sabattis, very bouldery-	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
655B:				
Sunapee, very bouldery--	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Fair: small stones
Monadnock, very bouldery	Good	Probable	Probable	Poor: area reclaim small stones too acid
661C:				
Hermon, very bouldery---	Fair: large stones	Probable	Probable	Poor: area reclaim small stones too sandy
661D:				
Hermon, very bouldery---	Poor: slope	Probable	Probable	Poor: area reclaim small stones too sandy

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
708B:				
Adirondack, very bouldery	Fair: large stones wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
Sabattis, undrained; very bouldery	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
Tughill, very bouldery	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
721C:				
Becket, very bouldery	Fair: wetness	Probable	Probable	Poor: area reclaim small stones
Tunbridge, very bouldery	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Skerry, very bouldery	Fair: wetness	Probable	Probable	Poor: area reclaim small stones
721D:				
Becket, very bouldery	Poor: slope	Probable	Probable	Poor: area reclaim slope small stones
Tunbridge, very bouldery	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
723C:				
Becket, very bouldery	Fair: wetness	Probable	Probable	Poor: area reclaim small stones
723D:				
Becket, very bouldery	Poor: slope	Probable	Probable	Poor: area reclaim slope small stones
725B:				
Skerry, very bouldery	Fair: wetness	Probable	Probable	Poor: area reclaim small stones
Becket, very bouldery	Fair: wetness	Probable	Probable	Poor: area reclaim small stones
727B:				
Skerry, very bouldery	Fair: wetness	Probable	Probable	Poor: area reclaim small stones

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Adirondack, very bouldery	Fair: large stones wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
831C:				
Tunbridge, very bouldery	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Lyman, very bouldery	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
831D:				
Tunbridge, very bouldery	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Lyman, very bouldery	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
831F:				
Tunbridge, very bouldery	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Lyman, very bouldery	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
861F:				
Lyman, very bouldery	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Ricker, very bouldery	Poor: low strength slope thin layer depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim excess humus slope
931C:				
Mundalite, very bouldery	Fair: wetness	Probable	Probable	Poor: area reclaim small stones
Rawsonville, very bouldery	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Worden, very bouldery	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
931D:				
Mundalite, very bouldery	Poor: slope	Probable	Probable	Poor: area reclaim slope small stones

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Rawsonville, very bouldery	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
933C:				
Mundalite, very bouldery	Fair: wetness	Probable	Probable	Poor: area reclaim small stones
Worden, very bouldery	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
941C:				
Rawsonville, very bouldery	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Hogback, very bouldery	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
941D:				
Rawsonville, very bouldery	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Hogback, very bouldery	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
941F:				
Rawsonville, very bouldery	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Hogback, very bouldery	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
943C:				
Rawsonville, very bouldery	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Borosaprists	Poor: wetness	Improbable: excess humus	Improbable: excess humus	Poor: excess humus wetness
Ricker, very bouldery	Poor: area reclaim low strength depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim excess humus
945F:				
Hogback, very bouldery	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Ricker, very bouldery---	Poor: low strength slope thin layer depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim excess humus slope
949F:				
Rock outcrop-------------	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope depth to rock
Ricker, very bouldery---	Poor: low strength slope thin layer depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim excess humus slope
Hogback, very bouldery--	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
991D:				
Glebe, very bouldery----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Skylight, very bouldery-	Poor: slope depth to rock	Improbable: thin layer	Improbable: thin layer	Poor: slope small stones too sandy depth to rock
997F:				
Ricker, very bouldery---	Poor: low strength slope thin layer depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim excess humus slope
Skylight, very bouldery-	Poor: slope depth to rock	Improbable: thin layer	Improbable: thin layer	Poor: slope small stones too sandy depth to rock
Rock Outcrop------------	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope depth to rock
AbA:				
Adams-------------------	Good	Probable	Improbable: too sandy	Poor: too sandy
AbB:				
Adams-------------------	Good	Probable	Improbable: too sandy	Poor: too sandy
AbC:				
Adams-------------------	Good	Probable	Improbable: too sandy	Poor: too sandy

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
AbD:				
Adams	Fair: slope	Probable	Improbable: too sandy	Poor: slope too sandy
AgB:				
Adirondack	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
AhB:				
Adirondack, very bouldery	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
Ak:				
Adjidaumo	Poor: low strength wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey wetness
Am:				
Adjidaumo, mucky silty clay	Poor: low strength wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey wetness
AtA:				
Amenia	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
AtB:				
Amenia	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
AwA:				
Appleton	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
AwB:				
Appleton	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
BcB:				
Becket	Fair: wetness	Probable	Probable	Poor: area reclaim small stones
BeC:				
Becket, very bouldery	Fair: wetness	Probable	Probable	Poor: area reclaim small stones
BeD:				
Becket, very bouldery	Poor: slope	Probable	Probable	Poor: area reclaim slope small stones

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
BgC:				
Becket, very bouldery---	Fair: wetness	Probable	Probable	Poor: area reclaim small stones
Tunbridge, very bouldery	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
BgE:				
Becket, very bouldery---	Poor: slope	Probable	Probable	Poor: area reclaim slope small stones
Tunbridge, very bouldery	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
BhC:				
Benson------------------	Poor: thin layer depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
BhE:				
Benson------------------	Poor: slope thin layer depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
Bo:				
Beseman-----------------	Poor: wetness	Improbable: excess humus	Improbable: excess humus	Poor: excess humus wetness too acid
BrB:				
Bice--------------------	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
BrC:				
Bice--------------------	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
BsC:				
Bice, very stony--------	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
BvB:				
Bombay------------------	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Bx:				
Bucksport---------------	Poor: wetness	Improbable: excess humus	Improbable: excess humus	Poor: excess humus wetness
CgA:				
Champlain---------------	Good	Probable	Improbable: too sandy	Poor: too sandy
CgB:				
Champlain---------------	Good	Probable	Improbable: too sandy	Poor: too sandy

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
CgC:				
Champlain	Good	Probable	Improbable: too sandy	Poor: too sandy
ChF:				
Champlain	Poor: slope	Probable	Improbable: too sandy	Poor: slope too sandy
Adams	Poor: slope	Probable	Improbable: too sandy	Poor: slope too sandy
Ck:				
Churubusco	Poor: wetness depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: excess humus wetness depth to rock
ClC:				
Colosse, very stony	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
Hermon, very stony	Fair: large stones	Probable	Probable	Poor: area reclaim small stones too sandy
CmB:				
Colosse	Good	Probable	Probable	Poor: area reclaim small stones
Trout River	Fair: large stones	Probable	Probable	Poor: area reclaim small stones too sandy
CmC:				
Colosse	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
Trout River	Good	Probable	Probable	Poor: area reclaim small stones too sandy
CnC:				
Colosse, very stony	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
Trout River, very stony	Good	Probable	Probable	Poor: area reclaim small stones too sandy
CnD:				
Colosse, very stony	Fair: large stones slope	Probable	Probable	Poor: area reclaim slope small stones

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
CnD:				
Trout River, very stony-	Fair: slope	Probable	Probable	Poor: area reclaim small stones too sandy
CoA:				
Colton------------------	Good	Probable	Probable	Poor: area reclaim small stones too sandy
CoB:				
Colton------------------	Good	Probable	Probable	Poor: area reclaim small stones too sandy
CoC:				
Colton------------------	Good	Probable	Probable	Poor: area reclaim small stones too sandy
CpC:				
Colton, very stony------	Good	Probable	Probable	Poor: area reclaim small stones too sandy
CpE:				
Colton, very stony------	Poor: slope	Probable	Probable	Poor: area reclaim slope small stones too sandy
Crk:				
Cook--------------------	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too sandy
Crr:				
Cornish-----------------	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: wetness
Cs:				
Covert------------------	Fair: wetness	Probable	Improbable: too sandy	Poor: too sandy
CtsA:				
Covertfalls-------------	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim too sandy
CtsB:				
Covertfalls-------------	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim too sandy

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
CttB:				
Covertfalls, gravelly---	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too sandy
CvA:				
Coveytown---------------	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too sandy
CvB:				
Coveytown---------------	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too sandy
CwB:				
Coveytown, very stony---	Fair: wetness	Improbable: thin layer excess fines	Improbable: excess fines	Poor: area reclaim large stones small stones too sandy
CxA:				
Croghan-----------------	Fair: wetness	Probable	Improbable: too sandy	Poor: too sandy
CxB:				
Croghan-----------------	Fair: wetness	Probable	Improbable: too sandy	Poor: too sandy
DeA:				
Deerfield---------------	Fair: wetness	Probable	Improbable: excess fines	Poor: too sandy
DeB:				
Deerfield---------------	Fair: wetness	Probable	Improbable: excess fines	Poor: too sandy
Df:				
Deinache----------------	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: too sandy wetness
FeB:				
Fahey, loamy substratum-	Fair: wetness	Improbable: thin layer	Improbable: thin layer	Poor: small stones
FhB:				
Fahey, very stony-------	Fair: large stones wetness	Improbable: thin layer	Improbable: thin layer	Poor: large stones small stones
FkB:				
Fernlake----------------	Good	Probable	Probable	Poor: area reclaim small stones
FlB:				
Fernlake, very bouldery-	Good	Probable	Probable	Poor: area reclaim small stones

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
FlC:				
Fernlake, very bouldery-	Good	Probable	Probable	Poor: area reclaim small stones
FlD:				
Fernlake, very bouldery-	Fair: slope	Probable	Probable	Poor: area reclaim slope small stones
FlF:				
Fernlake, very bouldery-	Poor: slope	Probable	Probable	Poor: area reclaim slope small stones
FmB:				
Flackville--------------	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: too sandy
Fn:				
Fluvaquents, frequently flooded----------------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Fluvaquents, frequently flooded----------------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Udifluvents, frequently flooded----------------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
GfC:				
Gardenisle--------------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Benson------------------	Poor: thin layer depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
Gl:				
Gougeville, undrained---	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: too sandy wetness
GrA:				
Grattan-----------------	Good	Probable	Improbable: too sandy	Poor: too sandy
GrB:				
Grattan-----------------	Good	Probable	Improbable: too sandy	Poor: too sandy
GvB:				
Grenville---------------	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
GwC:				
Grenville, very stony---	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Ha:				
Hailesboro	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Good
HeB:				
Hermon	Fair: large stones	Probable	Probable	Poor: area reclaim small stones too sandy
HeC:				
Hermon	Fair: large stones	Probable	Probable	Poor: area reclaim small stones too sandy
HfC:				
Hermon, very bouldery	Fair: large stones	Probable	Probable	Poor: area reclaim small stones too sandy
HfD:				
Hermon, very bouldery	Poor: slope	Probable	Probable	Poor: area reclaim small stones too sandy
HgC:				
Hermon, very bouldery	Fair: large stones	Probable	Probable	Poor: area reclaim small stones too sandy
Adirondack, very bouldery	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
HlB:				
Heuvelton	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
HlD:				
Heuvelton	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: slope too clayey
HoA:				
Hogansburg	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
HoB:				
Hogansburg	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
HrB:				
Hogansburg, very stony	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
InB:				
Irona-------------------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
Conic-------------------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too acid
Jn:				
Junius------------------	Fair: wetness	Probable	Improbable: too sandy	Poor: too sandy
KhB:				
Kalurah-----------------	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
KlB:				
Kalurah, very stony-----	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
Kr:				
Kingsbury---------------	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Rhinebeck---------------	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Ld:				
Lovewell, stratified substratum------------	Fair: wetness	Probable	Improbable: too sandy	Fair: area reclaim
Le:				
Loxley------------------	Poor: low strength wetness	Improbable: excess humus	Improbable: excess humus	Poor: excess humus wetness too acid
LtF:				
Lyman, very bouldery----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Tunbridge, very bouldery	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Rock Outcrop------------	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope depth to rock
Lv:				
Lyonmounten, undrained--	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Ly:				
Lyonmounten, very stony-	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
MaB:				
Madrid------------------	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
MaC:				
Madrid------------------	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
MeA:				
Malone------------------	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
MeB:				
Malone------------------	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
MfB:				
Malone, very stony------	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
Mk:				
Markey------------------	Poor: wetness	Probable	Improbable: too sandy	Poor: excess humus wetness
Mn:				
Massena-----------------	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
Mp:				
Medomak, stratified substratum------------	Poor: wetness	Probable	Probable	Poor: area reclaim wetness
Ms:				
Mino--------------------	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Good
MtB:				
Monadnock---------------	Good	Probable	Improbable: too sandy	Fair: small stones
MtC:				
Monadnock---------------	Good	Probable	Improbable: too sandy	Fair: slope small stones

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
MuC:				
Monadnock, very bouldery	Good	Probable	Probable	Poor: area reclaim small stones too acid
MuD:				
Monadnock, very bouldery	Fair: slope	Probable	Probable	Poor: slope
MuF:				
Monadnock, very bouldery	Poor: slope	Probable	Probable	Poor: slope
MvA:				
Mooers	Fair: wetness	Probable	Improbable: too sandy	Poor: too sandy
MvB:				
Mooers	Fair: wetness	Probable	Improbable: too sandy	Poor: too sandy
MwA:				
Muskellunge	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: thin layer too clayey
MwB:				
Muskellunge	Poor: low strength wetness	Improbable: excess fines	Improbable: excess fines	Poor: thin layer wetness
NeC:				
Neckrock	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Summerville	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock
NoB:				
Nicholville	Poor: frost action	Improbable: excess fines	Improbable: excess fines	Good
NrA:				
Northway	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim too sandy
NrB:				
Northway	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim too sandy
OcA:				
Occur	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
OcB:				
Occur	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
OgB:				
Ogdensburg-------------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
PeA:				
Peasleeville------------	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
PeB:				
Peasleeville------------	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
PfB:				
Peasleeville, very stony	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Pg:				
Pinconning, undrained---	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: too sandy wetness
Ph:				
Pipestone---------------	Fair: wetness	Probable	Improbable: too sandy	Poor: too sandy
Pn:				
Pits, Gravel------------	---	---	---	---
Po:				
Pits, Quarry------------	---	---	---	---
Pp:				
Pits, Sand--------------	---	---	---	---
PtA:				
Plainfield--------------	Good	Probable	Improbable: too sandy	Poor: too sandy
PtB:				
Plainfield--------------	Good	Probable	Improbable: too sandy	Poor: too sandy
PtC:				
Plainfield--------------	Good	Probable	Improbable: too sandy	Poor: too sandy
PvF:				
Plainfield--------------	Poor: slope	Probable	Improbable: too sandy	Poor: slope too sandy
Grattan-----------------	Good	Probable	Improbable: too sandy	Poor: too sandy
RoB:				
Rock Outcrop------------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock
Ricker------------------	Poor: low strength thin layer depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim excess humus

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Rr:				
Roundabout	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Good
Ry:				
Runeberg	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones wetness
Sb:				
Sabattis, undrained; very bouldery	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
Se:				
Saprists, ponded	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Aquents, ponded	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
ShB:				
Schroon	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
ShC:				
Schroon	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
SkB:				
Schroon, very stony	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Sn:				
Sciota	Fair: wetness	Probable	Improbable: too sandy	Poor: too sandy
So:				
Shaker	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Fair: thin layer
SpB:				
Sheddenbrook	Poor: depth to rock	Improbable: thin layer	Improbable: thin layer	Poor: small stones too sandy
SrB:				
Skerry	Fair: wetness	Probable	Probable	Poor: area reclaim small stones
SsB:				
Skerry, very bouldery	Fair: wetness	Probable	Probable	Poor: area reclaim small stones
SsC:				
Skerry, very bouldery	Fair: wetness	Probable	Probable	Poor: area reclaim small stones

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
StD:				
Success, very bouldery--	Poor: cemented pan	Probable	Probable	Poor: area reclaim cemented pan small stones too sandy
SwB:				
Sunapee----------------	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
SxB:				
Sunapee, very bouldery--	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Sz:				
Swanton----------------	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Fair: thin layer
TcB:				
Topknot----------------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
Chazy------------------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
TnC:				
Tunbridge, very bouldery	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Lyman, very bouldery----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
TnE:				
Tunbridge, very bouldery	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Lyman, very bouldery----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
Ud:				
Udipsamments, smoothed--	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Psammaquents, smoothed--	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Ue:				
Udipsamments, Mine Spoil, non-acid--------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Uf:				
Udorthents, Refuse Substratum------------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Ug:				
Udorthents, smoothed----	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Uh:				
Udorthents, wet substratum	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Un:				
Urban Land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
UpA:				
Urban Land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Plainfield	Good	Probable	Improbable: too sandy	Poor: too sandy
UpB:				
Urban Land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Plainfield	Good	Probable	Improbable: too sandy	Poor: too sandy
W:				
Water, areas < 40 acres	---	---	---	---
WdB:				
Waddington	Good	Probable	Probable	Poor: area reclaim small stones
Wn:				
Wainola, high ppt.	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: too sandy
WsB:				
Wallace	Poor: cemented pan	Probable	Improbable: too sandy	Poor: area reclaim cemented pan too sandy
WsC:				
Wallace	Poor: cemented pan	Probable	Improbable: too sandy	Poor: area reclaim cemented pan too sandy
WsE:				
Wallace	Poor: cemented pan slope	Probable	Improbable: too sandy	Poor: area reclaim cemented pan too sandy
Wu:				
Wonsqueak	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess humus wetness

Table 13.—Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable.)

Map symbol and soil name	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
15:							
Loxley, undrained, high ppt.	Severe: seepage	Severe: excess humus ponding	Severe: slow refill	Limitation: frost action subsides ponding	Limitation: too acid ponding	Limitation: ponding	Limitation: wetness
Beseman, undrained	Severe: seepage	Severe: excess humus ponding	Severe: slow refill	Limitation: frost action subsides ponding	Limitation: rooting depth ponding	Limitation: ponding	Limitation: rooting depth wetness
17:							
Beseman, undrained	Severe: seepage	Severe: excess humus ponding	Severe: slow refill	Limitation: frost action subsides ponding	Limitation: rooting depth ponding	Limitation: ponding	Limitation: rooting depth wetness
Rumney	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: flooding frost action cutbanks cave	Limitation: flooding wetness	Limitation: erodes easily too sandy wetness	Limitation: erodes easily wetness
Loxley, undrained	Severe: seepage	Severe: excess humus ponding	Severe: slow refill	Limitation: frost action subsides ponding	Limitation: too acid ponding	Limitation: ponding	Limitation: wetness
367:							
Searsport	Severe: seepage	Severe: seepage piping ponding	Severe: cutbanks cave	Limitation: ponding cutbanks cave	Limitation: ponding	Limitation: too sandy ponding	Limitation: wetness
Borosaprists	Severe: seepage	Severe: excess humus ponding	Severe: slow refill	Limitation: frost action subsides ponding	Limitation: wetness soil blowing	Limitation: soil blowing ponding	Limitation: wetness

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
Naumburg	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: slope cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness	Limitation: wetness droughty
375C:							
Colton	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
Adams	Severe: seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
375F:							
Colton	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
Adams	Severe: seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
651C:							
Monadnock, very bouldery	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope
Tunbridge, very bouldery	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
Sabattis, undrained; very bouldery	Severe: seepage	Severe: seepage piping wetness	Severe: slow refill	Limitation: frost action	Limitation: wetness droughty	Limitation: large stones wetness	Limitation: large stones wetness
651D:							
Monadnock, very bouldery	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope
Tunbridge, very bouldery	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
653C:							
Monadnock, very bouldery	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope
654C:							
Monadnock, very bouldery	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope
Sabattis, very bouldery	Severe: seepage	Severe: seepage piping wetness	Severe: slow refill	Limitation: frost action	Limitation: wetness droughty	Limitation: large stones wetness	Limitation: large stones wetness
655B:							
Sunapee, very bouldery	Severe: seepage slope	Severe: piping wetness	Severe: cutbanks cave	Limitation: slope	---	Limitation: large stones wetness	Limitation: large stones

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
Monadnock, very bouldery	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope
661C:							
Hermon, very bouldery	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
661D:							
Hermon, very bouldery	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
708B:							
Adirondack, very bouldery	Moderate: seepage slope	Severe: seepage	Severe: no water	Limitation: frost action percs slowly slope	Limitation: slope wetness droughty	Limitation: large stones percs slowly wetness	Limitation: large stones wetness
Sabattis, undrained; very bouldery	Severe: seepage	Severe: seepage piping wetness	Severe: slow refill	Limitation: frost action	Limitation: wetness droughty	Limitation: large stones wetness	Limitation: large stones wetness
Tughill, very bouldery	Slight	Severe: seepage ponding	Severe: slow refill	Limitation: frost action percs slowly ponding	Limitation: large stones ponding	Limitation: percs slowly ponding	Limitation: rooting depth wetness droughty
721C:							
Becket, very bouldery	Severe: slope	Severe: seepage	Severe: no water	Limitation: percs slowly slope cutbanks cave	Limitation: slope wetness droughty	Limitation: large stones percs slowly slope wetness	Limitation: large stones percs slowly slope

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Tunbridge, very bouldery	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
Skerry, very bouldery	Severe: slope	Severe: seepage	Severe: no water	Limitation: frost action percs slowly slope	Limitation: slope wetness droughty	Limitation: large stones percs slowly slope wetness	Limitation: large stones percs slowly slope
721D:							
Becket, very bouldery	Severe: slope	Severe: seepage	Severe: no water	Limitation: percs slowly slope cutbanks cave	Limitation: slope wetness droughty	Limitation: large stones slope wetness	Limitation: large stones percs slowly slope
Tunbridge, very bouldery	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
723C:							
Becket, very bouldery	Severe: slope	Severe: seepage	Severe: no water	Limitation: percs slowly slope cutbanks cave	Limitation: slope wetness droughty	Limitation: large stones slope wetness	Limitation: large stones percs slowly slope
723D:							
Becket, very bouldery	Severe: slope	Severe: seepage	Severe: no water	Limitation: percs slowly slope cutbanks cave	Limitation: slope wetness droughty	Limitation: large stones slope wetness	Limitation: large stones percs slowly slope
725B:							
Skerry, very bouldery	Severe: slope	Severe: seepage	Severe: no water	Limitation: frost action percs slowly slope	Limitation: slope wetness droughty	Limitation: large stones slope wetness	Limitation: large stones percs slowly slope

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
Becket, very bouldery--	Severe: slope	Severe: seepage	Severe: no water	Limitation: percs slowly slope cutbanks cave	Limitation: slope wetness droughty	Limitation: large stones slope wetness	Limitation: large stones percs slowly slope
727B:							
Skerry, very bouldery--	Moderate: seepage slope	Severe: seepage	Severe: no water	Limitation: frost action percs slowly slope	Limitation: slope wetness droughty	Limitation: large stones wetness	Limitation: large stones percs slowly
Adirondack, very bouldery--------------	Moderate: seepage slope	Severe: seepage	Severe: no water	Limitation: frost action percs slowly slope	Limitation: slope wetness droughty	Limitation: large stones percs slowly wetness	Limitation: large stones wetness
831C:							
Tunbridge, very bouldery--------------	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
Lyman, very bouldery---	Severe: slope depth to rock	Severe: piping thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: slope depth to rock	Limitation: slope depth to rock
831D:							
Tunbridge, very bouldery--------------	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
Lyman, very bouldery---	Severe: slope depth to rock	Severe: piping thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: slope depth to rock	Limitation: slope depth to rock

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
831F:							
Tunbridge, very bouldery	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
Lyman, very bouldery	Severe: slope depth to rock	Severe: piping thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: slope depth to rock	Limitation: slope depth to rock
861F:							
Lyman, very bouldery	Severe: slope depth to rock	Severe: piping thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: slope depth to rock	Limitation: slope depth to rock
Ricker, very bouldery	Severe: slope depth to rock	Severe: thin layer	Severe: no water	Limitation: slope deep to water depth to rock	Limitation: slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
931C:							
Mundalite, very bouldery	Severe: slope	Severe: seepage	Severe: no water	Limitation: large stones percs slowly slope	Limitation: slope wetness soil blowing	Limitation: slope too sandy wetness	Limitation: percs slowly rooting depth slope
Rawsonville, very bouldery	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: percs slowly slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
Worden, very bouldery	Severe: slope	Severe: piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly wetness droughty	Limitation: erodes easily slope wetness	Limitation: erodes easily slope wetness

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
931D:							
Mundalite, very bouldery	Severe: slope	Severe: seepage	Severe: no water	Limitation: large stones percs slowly slope	Limitation: slope wetness soil blowing	Limitation: slope too sandy wetness	Limitation: percs slowly rooting depth slope
Rawsonville, very bouldery	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: percs slowly slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
933C:							
Mundalite, very bouldery	Severe: slope	Severe: seepage	Severe: no water	Limitation: large stones percs slowly slope	Limitation: slope wetness soil blowing	Limitation: slope too sandy wetness	Limitation: percs slowly rooting depth slope
Worden, very bouldery	Severe: slope	Severe: piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly wetness droughty	Limitation: erodes easily slope wetness	Limitation: erodes easily slope wetness
941C:							
Rawsonville, very bouldery	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: percs slowly slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
Hogback, very bouldery	Severe: slope depth to rock	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: large stones slope depth to rock	Limitation: erodes easily large stones slope
941D:							
Rawsonville, very bouldery	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: percs slowly slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
Hogback, very bouldery-	Severe: slope depth to rock	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: large stones slope depth to rock	Limitation: erodes easily large stones slope
941F:							
Rawsonville, very bouldery-------------	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: percs slowly slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
Hogback, very bouldery-	Severe: slope depth to rock	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: large stones slope depth to rock	Limitation: erodes easily large stones slope
943C:							
Rawsonville, very bouldery-------------	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: percs slowly slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
Borosaprists-----------	Severe: seepage	Severe: excess humus ponding	Severe: slow refill	Limitation: frost action subsides ponding	Limitation: wetness soil blowing	Limitation: soil blowing ponding	Limitation: wetness
Ricker, very bouldery--	Severe: slope depth to rock	Severe: thin layer	Severe: no water	Limitation: slope deep to water depth to rock	Limitation: slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
945F:							
Hogback, very bouldery-	Severe: slope depth to rock	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: large stones slope depth to rock	Limitation: erodes easily large stones slope

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
Ricker, very bouldery--	Severe: slope depth to rock	Severe: thin layer	Severe: no water	Limitation: slope deep to water depth to rock	Limitation: slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
949F:							
Rock outcrop-----------	Severe: slope depth to rock	Severe: thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: slope depth to rock
Ricker, very bouldery--	Severe: slope depth to rock	Severe: thin layer	Severe: no water	Limitation: slope deep to water depth to rock	Limitation: slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
Hogback, very bouldery-	Severe: slope depth to rock	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: large stones slope depth to rock	Limitation: erodes easily large stones slope
991D:							
Glebe, very bouldery---	Severe: seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
Skylight, very bouldery	Severe: slope depth to rock	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy depth to rock	Limitation: slope depth to rock droughty
997F:							
Ricker, very bouldery--	Severe: seepage slope depth to rock	Severe: thin layer	Severe: no water	Limitation: slope deep to water depth to rock	Limitation: slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
Skylight, very bouldery	Severe: seepage slope depth to rock	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy depth to rock	Limitation: slope depth to rock droughty

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
Rock Outcrop	Severe: slope depth to rock	Severe: thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: slope depth to rock
AbA: Adams	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: droughty
AbB: Adams	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
AbC: Adams	Severe: seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
AbD: Adams	Severe: seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
AgB: Adirondack	Moderate: seepage slope	Severe: seepage	Severe: no water	Limitation: frost action percs slowly slope	Limitation: slope wetness droughty	Limitation: percs slowly wetness	Limitation: wetness
AhB: Adirondack, very bouldery	Moderate: seepage slope	Severe: seepage	Severe: no water	Limitation: frost action percs slowly slope	Limitation: slope wetness droughty	Limitation: large stones percs slowly wetness	Limitation: large stones wetness

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
Ak:							
Adjidaumo	Slight	Severe: wetness	Severe: slow refill	Limitation: frost action percs slowly	Limitation: percs slowly slow intake wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
Am:							
Adjidaumo, mucky silty clay	Slight	Severe: ponding	Severe: slow refill	Limitation: frost action percs slowly ponding	Limitation: erodes easily percs slowly ponding	Limitation: erodes easily percs slowly ponding	Limitation: erodes easily percs slowly wetness
AtA:							
Amenia	Moderate: seepage	Moderate: seepage piping wetness	Severe: no water	Limitation: percs slowly	Limitation: percs slowly wetness	Limitation: percs slowly wetness	Limitation: percs slowly
AtB:							
Amenia	Moderate: seepage slope	Moderate: seepage piping wetness	Severe: no water	Limitation: percs slowly slope	Limitation: percs slowly slope wetness	Limitation: percs slowly wetness	Limitation: percs slowly
AwA:							
Appleton	Slight	Severe: wetness	Severe: no water	Limitation: frost action percs slowly	Limitation: percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily wetness
AwB:							
Appleton	Moderate: slope	Severe: wetness	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily wetness
BcB:							
Becket	Moderate: seepage slope	Severe: seepage	Severe: no water	Limitation: percs slowly slope	Limitation: percs slowly rooting depth slope	Limitation: percs slowly wetness soil blowing	Limitation: percs slowly

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
BeC:							
Becket, very bouldery--	Severe: slope	Severe: seepage	Severe: no water	Limitation: percs slowly slope cutbanks cave	Limitation: slope wetness droughty	Limitation: large stones slope wetness	Limitation: large stones percs slowly slope
BeD:							
Becket, very bouldery--	Severe: slope	Severe: seepage	Severe: no water	Limitation: percs slowly slope cutbanks cave	Limitation: slope wetness droughty	Limitation: large stones slope wetness	Limitation: large stones percs slowly slope
BgC:							
Becket, very bouldery--	Severe: slope	Severe: seepage	Severe: no water	Limitation: percs slowly slope cutbanks cave	Limitation: slope wetness droughty	Limitation: large stones slope wetness	Limitation: large stones percs slowly slope
Tunbridge, very bouldery--------------	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
BgE:							
Becket, very bouldery--	Severe: slope	Severe: seepage	Severe: no water	Limitation: percs slowly slope cutbanks cave	Limitation: slope wetness droughty	Limitation: large stones slope wetness	Limitation: large stones percs slowly slope
Tunbridge, very bouldery--------------	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
BhC:							
Benson-----------------	Severe: slope depth to rock	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: large stones depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
BhE:							
Benson	Severe: slope depth to rock	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: large stones depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
Bo:							
Beseman	Severe: seepage	Severe: excess humus ponding	Severe: slow refill	Limitation: frost action subsides ponding	Limitation: rooting depth ponding	Limitation: ponding	Limitation: rooting depth wetness
BrB:							
Bice	Severe: seepage	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope soil blowing droughty	Limitation: soil blowing	Favorable
BrC:							
Bice	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope soil blowing droughty	Limitation: slope soil blowing	Limitation: slope
BsC:							
Bice, very stony	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope	Limitation: large stones slope
BvB:							
Bombay	Moderate: seepage slope	Severe: piping	Severe: no water	Limitation: slope	Limitation: slope wetness	Limitation: wetness	Favorable
Bx:							
Bucksport	Severe: seepage	Severe: excess humus wetness	Severe: slow refill	Limitation: frost action	Limitation: wetness	Limitation: wetness	Limitation: wetness
CgA:							
Champlain	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: droughty

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
CgB:							
Champlain	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
CgC:							
Champlain	Severe: seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
ChF:							
Champlain	Severe: seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
Adams	Severe: seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
Ck:							
Churubusco	Severe: seepage depth to rock	Severe: excess humus thin layer ponding	Severe: depth to rock	Limitation: subsides ponding depth to rock	Limitation: soil blowing ponding depth to rock	Limitation: ponding depth to rock	Limitation: wetness depth to rock
ClC:							
Colosse, very stony	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
Hermon, very stony	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
CmB:							
Colosse	Severe: seepage	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: slope too sandy	Limitation: droughty
Trout River	Severe: seepage	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones too sandy	Limitation: large stones droughty
CmC:							
Colosse	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: slope too sandy	Limitation: slope droughty
Trout River	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
CnC:							
Colosse, very stony	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
Trout River, very stony	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
CnD:							
Colosse, very stony	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
Trout River, very stony	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Limitations for-- Embankments, dikes, and levees	Limitations for-- Aquifer-fed excavated ponds	Features affecting-- Drainage	Features affecting-- Irrigation	Features affecting-- Terraces and diversions	Features affecting-- Grassed waterways
CoA: Colton	Severe: seepage	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: large stones too sandy	Limitation: large stones droughty
CoB: Colton	Severe: seepage	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: large stones too sandy	Limitation: large stones droughty
CoC: Colton	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
CpC: Colton, very stony	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: fast intake large stones droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
CpE: Colton, very stony	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: fast intake large stones droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
Crk: Cook	Severe: seepage	Severe: piping wetness	Severe: slow refill cutbanks cave	Favorable	Limitation: wetness droughty	Limitation: wetness soil blowing	Limitation: rooting depth wetness droughty
Crr: Cornish	Moderate: seepage	Severe: piping wetness	Moderate: slow refill	Limitation: flooding frost action	Limitation: flooding wetness	Limitation: erodes easily wetness	Limitation: erodes easily wetness

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
Cs: Covert	Severe: seepage	Severe: seepage piping	Severe: cutbanks cave	Limitation: cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: droughty
CtsA: Covertfalls	Severe: seepage	Severe: piping	Severe: no water	Favorable	Limitation: wetness droughty	Limitation: wetness soil blowing	Limitation: rooting depth droughty
CtsB: Covertfalls	Severe: seepage	Severe: piping	Severe: no water	Limitation: slope	Limitation: slope wetness droughty	Limitation: wetness soil blowing	Limitation: rooting depth droughty
CttB: Covertfalls, gravelly	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: slope	Limitation: slope wetness droughty	Limitation: wetness	Limitation: rooting depth droughty
CvA: Coveytown	Severe: seepage	Severe: piping wetness	Severe: slow refill cutbanks cave	Limitation: cutbanks cave	Limitation: fast intake wetness droughty	Limitation: wetness soil blowing	Limitation: wetness droughty
CvB: Coveytown	Severe: seepage	Severe: piping wetness	Severe: slow refill cutbanks cave	Limitation: slope cutbanks cave	Limitation: fast intake slope wetness	Limitation: wetness soil blowing	Limitation: wetness droughty
CwB: Coveytown, very stony	Severe: seepage	Severe: piping wetness	Severe: slow refill cutbanks cave	Limitation: large stones slope cutbanks cave	Limitation: slope wetness	Limitation: large stones too sandy wetness	Limitation: wetness droughty

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
CxA: Croghan	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: droughty
CxB: Croghan	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: slope cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: droughty
DeA: Deerfield	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: cutbanks cave	---	Limitation: too sandy wetness soil blowing	Limitation: droughty
DeB: Deerfield	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: slope cutbanks cave	---	Limitation: too sandy wetness soil blowing	Limitation: droughty
Df: Deinache	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: wetness droughty
FeB: Fahey, loamy substratum	Severe: seepage	Severe: seepage wetness	Severe: slow refill cutbanks cave	Limitation: large stones slope cutbanks cave	Limitation: large stones slope wetness	Limitation: large stones too sandy wetness	Limitation: large stones droughty
FhB: Fahey, very stony	Severe: seepage	Severe: seepage wetness	Severe: cutbanks cave	Limitation: large stones slope cutbanks cave	Limitation: large stones wetness droughty	Limitation: large stones too sandy wetness	Limitation: large stones droughty

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
FkB: Fernlake	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: large stones too sandy	Limitation: large stones droughty
FlB: Fernlake, very bouldery	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: large stones too sandy	Limitation: large stones droughty
FlC: Fernlake, very bouldery	Severe: seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
FlD: Fernlake, very bouldery	Severe: seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
FlF: Fernlake, very bouldery	Severe: seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
FmB: Flackville	Severe: seepage	Severe: piping	Severe: no water	Limitation: percs slowly slope	Limitation: slope wetness droughty	Limitation: percs slowly wetness soil blowing	Limitation: percs slowly droughty
Fn: Fluvaquents, frequently flooded	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
Fluvaquents, frequently flooded	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Udifluvents, frequently flooded	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
GfC:							
Gardenisle	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: slope depth to rock	Limitation: slope depth to rock
Benson	Severe: slope depth to rock	Severe: seepage thin layer	Severe: no water	Limitation: deep to water	Limitation: large stones depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
Gl:							
Gougeville, undrained	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: wetness droughty
GrA:							
Grattan	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: droughty
GrB:							
Grattan	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
GvB:							
Grenville	Moderate: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: rooting depth slope droughty	Favorable	Limitation: rooting depth droughty

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
GwC:							
Grenville, very stony--	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: rooting depth slope droughty	Limitation: slope	Limitation: rooting depth slope droughty
Ha:							
Hailesboro-------------	Slight	Severe: piping wetness	Severe: slow refill	Limitation: frost action	Limitation: percs slowly wetness	Limitation: erodes easily wetness	Limitation: erodes easily wetness
HeB:							
Hermon-----------------	Severe: seepage	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones too sandy	Limitation: large stones droughty
HeC:							
Hermon-----------------	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
HfC:							
Hermon, very bouldery--	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
HfD:							
Hermon, very bouldery--	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
HgC:							
Hermon, very bouldery--	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
Adirondack, very bouldery	Moderate: seepage slope	Severe: seepage	Severe: no water	Limitation: frost action percs slowly slope	Limitation: slope wetness droughty	Limitation: large stones percs slowly wetness	Limitation: large stones wetness
HlB: Heuvelton	Moderate: seepage slope	Severe: piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly
HlD: Heuvelton	Severe: slope	Severe: piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly wetness	Limitation: erodes easily slope wetness	Limitation: erodes easily percs slowly slope
HoA: Hogansburg	Moderate: seepage	Severe: piping	Severe: no water	Limitation: frost action	Limitation: rooting depth wetness	Limitation: wetness	Limitation: rooting depth
HoB: Hogansburg	Moderate: seepage slope	Severe: piping	Severe: no water	Limitation: frost action slope	Limitation: rooting depth slope wetness	Limitation: wetness	Limitation: rooting depth
HrB: Hogansburg, very stony	Moderate: seepage slope	Severe: piping	Severe: no water	Limitation: frost action slope	Limitation: rooting depth slope wetness	Limitation: wetness	Limitation: rooting depth
InB: Irona	Severe: depth to rock	Severe: seepage piping thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: depth to rock	Limitation: depth to rock droughty

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
Conic	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: percs slowly slope droughty	Limitation: percs slowly slope depth to rock	Limitation: slope depth to rock droughty
Jn: Junius	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: wetness droughty
KhB: Kalurah	Moderate: slope	Severe: piping	Severe: no water	Limitation: frost action slope	Limitation: slope wetness	Limitation: wetness	Favorable
KlB: Kalurah, very stony	Moderate: slope	Severe: piping	Severe: no water	Limitation: frost action slope	Limitation: slope wetness droughty	Limitation: wetness	Limitation: droughty
Kr: Kingsbury	Slight	Severe: hard to pack	Severe: no water	Limitation: frost action percs slowly	Limitation: percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
Rhinebeck	Slight	Moderate: hard to pack wetness	Severe: no water	Limitation: frost action percs slowly	Limitation: percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
Ld: Lovewell, stratified substratum	Severe: seepage	Severe: piping wetness	Severe: cutbanks cave	Limitation: flooding frost action	Limitation: flooding wetness	Limitation: erodes easily wetness	Limitation: erodes easily

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Limitations for-- Embankments, dikes, and levees	Limitations for-- Aquifer-fed excavated ponds	Features affecting-- Drainage	Features affecting-- Irrigation	Features affecting-- Terraces and diversions	Features affecting-- Grassed waterways
Le: Loxley	Severe: seepage	Severe: excess humus ponding	Severe: slow refill	Limitation: frost action subsides ponding	Limitation: too acid ponding	Limitation: ponding	Limitation: wetness
LtF: Lyman, very bouldery	Severe: slope depth to rock	Severe: piping thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: slope depth to rock	Limitation: slope depth to rock
Tunbridge, very bouldery	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
Rock Outcrop	Severe: slope depth to rock	Severe: thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: slope depth to rock
Lv: Lyonmounten, undrained	Moderate: seepage	Severe: piping wetness	Severe: slow refill	Limitation: frost action	Limitation: wetness	Limitation: wetness	Limitation: wetness
Ly: Lyonmounten, very stony	Moderate: seepage	Severe: piping wetness	Severe: slow refill	Limitation: frost action	Limitation: wetness	Limitation: wetness	Limitation: wetness
MaB: Madrid	Moderate: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Favorable	Favorable
MaC: Madrid	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: slope	Limitation: slope

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
MeA: Malone	Slight	Severe: piping	Severe: no water	Limitation: frost action, percs slowly	Limitation: wetness, droughty	Limitation: percs slowly, wetness	Limitation: percs slowly, rooting depth, wetness
MeB: Malone	Moderate: slope	Severe: piping	Severe: no water	Limitation: frost action, percs slowly, slope	Limitation: slope, wetness, droughty	Limitation: percs slowly, wetness	Limitation: percs slowly, rooting depth, wetness
MfB: Malone, very stony	Moderate: slope	Severe: piping	Severe: no water	Limitation: frost action, percs slowly, slope	Limitation: slope, wetness, droughty	Limitation: percs slowly, wetness	Limitation: percs slowly, rooting depth, wetness
Mk: Markey	Severe: seepage	Severe: seepage, piping, ponding	Severe: slow refill, cutbanks cave	Limitation: frost action, subsides, ponding	Limitation: rooting depth, soil blowing, ponding	Limitation: too sandy, soil blowing, ponding	Limitation: wetness
Mn: Massena	Slight	Severe: piping	Severe: slow refill	Limitation: frost action, percs slowly	Limitation: wetness, droughty	Limitation: percs slowly, wetness	Limitation: percs slowly, wetness
Mp: Medomak, stratified substratum	Severe: seepage	Severe: piping, wetness	Severe: cutbanks cave	Limitation: flooding, frost action, cutbanks cave	Limitation: flooding, wetness	Limitation: erodes easily, ponding	Limitation: erodes easily, wetness
Ms: Mino	Moderate: seepage	Severe: piping, wetness	Moderate: slow refill	Limitation: frost action	Limitation: wetness	Limitation: wetness	Limitation: wetness

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
MtB:							
Monadnock	Severe: seepage	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: slope	Limitation: too sandy soil blowing	Favorable
MtC:							
Monadnock	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: slope	Limitation: slope too sandy soil blowing	Limitation: slope
MuC:							
Monadnock, very bouldery	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope
MuD:							
Monadnock, very bouldery	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope
MuF:							
Monadnock, very bouldery	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope
MvA:							
Mooers	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: droughty
MvB:							
Mooers	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: slope cutbanks cave	Limitation: slope wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: droughty

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
MwA: Muskellunge	Slight	Moderate: hard to pack wetness	Severe: slow refill cutbanks cave	Limitation: frost action percs slowly	Limitation: percs slowly wetness	Limitation: erodes easily wetness	Limitation: erodes easily wetness
MwB: Muskellunge	Moderate: slope	Moderate: hard to pack wetness	Severe: slow refill cutbanks cave	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
NeC: Neckrock	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: slope depth to rock	Limitation: slope depth to rock
Summerville	Severe: slope depth to rock	Severe: piping thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: slope depth to rock
NoB: Nicholville	Moderate: seepage slope	Severe: piping	Severe: no water	Limitation: frost action	Limitation: erodes easily	Limitation: erodes easily wetness	Limitation: erodes easily
NrA: Northway	Severe: seepage	Severe: piping	Severe: no water	Favorable	Limitation: wetness droughty	Limitation: wetness soil blowing	Limitation: rooting depth wetness droughty
NrB: Northway	Severe: seepage	Severe: piping	Severe: no water	Limitation: slope	Limitation: slope wetness droughty	Limitation: wetness soil blowing	Limitation: rooting depth wetness droughty
OcA: Occur	Severe: seepage	Severe: piping	Severe: no water	Favorable	Limitation: wetness droughty	Limitation: wetness soil blowing	Limitation: rooting depth droughty

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
OcB: Occur	Severe: seepage	Severe: piping	Severe: no water	Limitation: slope	Limitation: slope wetness droughty	Limitation: wetness soil blowing	Limitation: rooting depth droughty
OgB: Ogdensburg	Severe: seepage	Severe: piping	Severe: no water	Limitation: frost action slope depth to rock	Limitation: slope wetness depth to rock	Limitation: wetness depth to rock	Limitation: wetness depth to rock
PeA: Peasleeville	Moderate: seepage	Severe: piping wetness	Moderate: slow refill	Limitation: frost action	Limitation: wetness	Limitation: wetness	Limitation: wetness
PeB: Peasleeville	Moderate: seepage slope	Severe: piping wetness	Moderate: slow refill	Limitation: frost action slope	Limitation: slope wetness	Limitation: wetness	Limitation: wetness
PfB: Peasleeville, very stony	Moderate: seepage slope	Severe: piping wetness	Moderate: slow refill	Limitation: frost action slope	Limitation: slope wetness droughty	Limitation: wetness	Limitation: wetness droughty
Pg: Pinconning, undrained	Severe: seepage	Severe: ponding	Severe: slow refill cutbanks cave	Limitation: percs slowly ponding cutbanks cave	Limitation: fast intake ponding droughty	Limitation: percs slowly soil blowing ponding	Limitation: percs slowly wetness droughty
Ph: Pipestone	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: wetness droughty
Pn: Pits, Gravel	---	---	---	---	---	---	---

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
Po: Pits, Quarry	---	---	---	---	---	---	---
Pp: Pits, Sand	---	---	---	---	---	---	---
PtA: Plainfield	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: droughty
PtB: Plainfield	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
PtC: Plainfield	Severe: seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
PvF: Plainfield	Severe: seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
Grattan	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: droughty
RoB: Rock Outcrop	Severe: depth to rock	Severe: thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: depth to rock	Limitation: depth to rock
Ricker	Severe: depth to rock	Severe: thin layer	Severe: no water	Limitation: deep to water depth to rock	Limitation: slope depth to rock	Limitation: erodes easily depth to rock	Limitation: erodes easily depth to rock

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Limitations for-- Embankments, dikes, and levees	Limitations for-- Aquifer-fed excavated ponds	Features affecting-- Drainage	Features affecting-- Irrigation	Features affecting-- Terraces and diversions	Features affecting-- Grassed waterways
Rr:							
Roundabout	Moderate: seepage	Severe: piping wetness	Severe: no water	Limitation: frost action percs slowly	Limitation: percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
Ry:							
Runeberg	Slight	Severe: piping wetness	Severe: no water	Limitation: frost action percs slowly	Limitation: percs slowly wetness	Limitation: percs slowly wetness	Limitation: percs slowly rooting depth wetness
Sb:							
Sabattis, undrained; very bouldery	Severe: seepage	Severe: seepage piping wetness	Severe: slow refill	Limitation: frost action	Limitation: wetness droughty	Limitation: large stones wetness	Limitation: large stones wetness
Se:							
Saprists, ponded	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Aquents, ponded	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
ShB:							
Schroon	Moderate: seepage slope	Severe: piping wetness	Moderate: slow refill	Limitation: frost action slope	Limitation: slope wetness droughty	Limitation: wetness soil blowing	Favorable
ShC:							
Schroon	Severe: slope	Severe: piping wetness	Moderate: slow refill	Limitation: frost action slope	Limitation: slope wetness droughty	Limitation: slope wetness soil blowing	Limitation: slope

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
SkB:							
Schroon, very stony----	Moderate: seepage slope	Severe: piping wetness	Moderate: slow refill	Limitation: frost action slope	Limitation: slope wetness droughty	Limitation: large stones wetness	Limitation: large stones slope
Sn:							
Sciota-----------------	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: wetness droughty
So:							
Shaker-----------------	Severe: seepage	Severe: wetness	Severe: slow refill	Limitation: frost action percs slowly	Limitation: percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
SpB:							
Sheddenbrook-----------	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave depth to rock	Limitation: slope cutbanks cave depth to rock	Limitation: slope wetness droughty	Limitation: too sandy wetness depth to rock	Limitation: depth to rock droughty
SrB:							
Skerry-----------------	Moderate: seepage slope	Moderate: seepage	Severe: no water	Limitation: frost action percs slowly slope	Limitation: rooting depth slope wetness	Limitation: percs slowly wetness soil blowing	Limitation: percs slowly rooting depth
SsB:							
Skerry, very bouldery--	Moderate: seepage slope	Severe: seepage	Severe: no water	Limitation: frost action percs slowly slope	Limitation: slope wetness droughty	Limitation: large stones wetness	Limitation: large stones percs slowly
SsC:							
Skerry, very bouldery--	Severe: slope	Severe: seepage	Severe: no water	Limitation: frost action percs slowly slope	Limitation: slope wetness droughty	Limitation: large stones slope wetness	Limitation: large stones percs slowly slope

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
StD: Success, very bouldery-	Severe: cemented pan seepage slope	Severe: large stones seepage	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: cemented pan large stones slope	Limitation: large stones slope droughty
SwB: Sunapee----------------	Severe: seepage	Severe: piping wetness	Severe: cutbanks cave	Limitation: slope	Limitation: slope wetness	Limitation: wetness soil blowing	Favorable
SxB: Sunapee, very bouldery-	Severe: seepage	Severe: piping wetness	Severe: cutbanks cave	Limitation: slope	---	Limitation: large stones wetness	Limitation: large stones
Sz: Swanton----------------	Severe: seepage	Severe: wetness	Severe: no water	Limitation: frost action percs slowly	Limitation: wetness soil blowing	Limitation: erodes easily wetness soil blowing	Limitation: erodes easily percs slowly wetness
TcB: Topknot----------------	Severe: depth to rock	Severe: piping wetness	Severe: depth to rock	Limitation: frost action slope depth to rock	Limitation: slope wetness droughty	Limitation: wetness depth to rock	Limitation: wetness depth to rock
Chazy------------------	Moderate: seepage slope depth to rock	Severe: piping wetness	Severe: depth to rock	Limitation: frost action slope depth to rock	Limitation: slope wetness depth to rock	Limitation: wetness depth to rock	Limitation: wetness depth to rock
TnC: Tunbridge, very bouldery--------------	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
Lyman, very bouldery---	Severe: slope depth to rock	Severe: piping thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: slope depth to rock	Limitation: slope depth to rock
TnE:							
Tunbridge, very bouldery--------------	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
Lyman, very bouldery---	Severe: slope depth to rock	Severe: piping thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: slope depth to rock	Limitation: slope depth to rock
Ud:							
Udipsamments, smoothed-	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Psammaquents, smoothed-	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Ue:							
Udipsamments, Mine Spoil, non-acid-------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Uf:							
Udorthents, Refuse Substratum-----------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Ug:							
Udorthents, smoothed---	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Uh:							
Udorthents, wet substratum-----------	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Un:							
Urban Land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
UpA:							
Urban Land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Plainfield	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: droughty
UpB:							
Urban Land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Plainfield	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: droughty
W:							
Water, areas < 40 acres	---	---	---	---	---	---	---
WdB:							
Waddington	Severe: seepage	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones too sandy	Limitation: large stones droughty
Wn:							
Wainola, high ppt.	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: wetness droughty
WsB:							
Wallace	Severe: cemented pan seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: cemented pan too sandy soil blowing	Limitation: cemented pan droughty

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
WsC: Wallace	Severe: cemented pan seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: cemented pan slope too sandy soil blowing	Limitation: cemented pan slope droughty
WsE: Wallace	Severe: cemented pan seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: cemented pan slope too sandy soil blowing	Limitation: cemented pan slope droughty
Wu: Wonsqueak	Severe: seepage	Severe: piping wetness	Severe: slow refill	Limitation: frost action subsides	Limitation: wetness	Limitation: erodes easily wetness	Limitation: erodes easily wetness

Table 14.—Engineering Index Properties

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
15:												
Loxley, undrained, high ppt.-----------	0-16	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	16-72	Muck	PT	A-8	0	0	---	---	---	---	---	---
Beseman, undrained------	0-2	Peat	PT	A-8	0	0	---	---	---	---	---	---
	2-10	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	10-45	Muck	PT	A-8	0	0	---	---	---	---	---	---
	45-72	Fine sandy loam, sandy loam, loam	CL, SM, SC, ML	A-6, A-4, A-2	0-2	0-2	80-100	70-100	55-95	25-75	15-30	NP-12
17:												
Beseman, undrained------	0-2	Peat	PT	A-8	0	0	---	---	---	---	---	---
	2-10	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	10-45	Muck	PT	A-8	0	0	---	---	---	---	---	---
	45-72	Fine sandy loam, sandy loam, loam	SM, SC, CL, ML	A-6, A-4, A-2	0-2	0-2	80-100	70-100	55-95	25-75	15-30	NP-12
Rumney----------	0-12	Silt loam	ML	A-4	0	0	95-100	80-100	60-100	35-90	0-25	1-4
	12-39	Very fine sandy loam, loam, sandy loam	ML, SM	A-2, A-4	0	0	85-100	75-100	60-95	30-75	0-15	NP-4
	39-72	Loamy sand	SM, SP-SM	A-2, A-3	0	0	70-100	50-100	50-80	5-30	0-14	NP
Loxley, undrained------	0-16	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	16-72	Muck	PT	A-8	0	0	---	---	---	---	---	---
367:												
Searsport-------	0-8	Muck	PT	A-8	0	0	---	---	---	---	---	---
	8-50	Loamy sand, loamy fine sand, coarse sand	SP-SM, SM	A-2, A-3, A-4	0	0	80-100	75-100	50-80	5-40	0-14	NP
	50-72	Coarse sand, very gravelly sand, gravelly loamy fine sand	SM, GM, SP-SM	A-1, A-2, A-3, A-4	0	0	65-100	40-100	35-80	5-40	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Borosaprists----	0-7	Mucky peat	PT	A-8	---	---	---	---	---	---	0-14	---
	7-30	Muck	PT	A-8	---	---	---	---	---	---	0-14	---
	30-72	Fine sandy loam, silt loam, sandy loam, gravelly loam, very gravelly loamy sand	CL, ML, SC, SM	A-6, A-2, A-4	0-2	0-2	75-100	50-100	45-95	25-95	15-30	NP-12
Naumburg--------	0-2	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-3	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-7	Sand	SW-SM, SP-SM, SM	A-2, A-3, A-4	0	0	95-100	90-100	50-85	5-45	0-14	NP
	7-33	Loamy sand, loamy fine sand, sand	SM, SP-SM, SW-SM	A-1, A-2, A-3	0	0	95-100	90-100	45-80	5-35	0-14	NP
	33-72	Loamy fine sand, fine sand, sand, coarse sand	SW-SM, SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	45-80	5-35	0-14	NP
375C:												
Colton----------	0-1	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	1-3	Gravelly loamy coarse sand	GP-GM, SM	A-1, A-2	0	0-25	50-90	35-80	20-60	2-25	0-10	NP-2
	3-22	Gravelly loamy coarse sand, very gravelly coarse sand, cobbly sand, gravelly loamy fine sand	GM, GP, SM, SP	A-1	0-1	0-25	50-85	35-80	15-50	0-20	0-14	NP
	22-72	Very gravelly coarse sand, very cobbly sand, extremely gravelly coarse sand	GP-GM, GW, GP	A-1	0-1	2-30	45-80	20-50	10-30	0-10	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
Adams-----------	0-7	Loamy sand	SM, SP-SM	A-3, A-4, A-2, A-1	0	0	95-100	90-100	45-85	5-40	0-14	NP
	7-9	Sand, loamy sand, loamy fine sand	SM, SP-SM	A-2, A-4	0	0	95-100	90-100	45-85	5-40	15-20	NP-4
	9-27	Loamy sand, sand, loamy fine sand	SP-SM, SM	A-1, A-2, A-4, A-3	0	0	95-100	90-100	45-85	5-40	0-14	NP
	27-72	Fine sand, sand, coarse sand, gravelly sand	SW-SM, SM, SP-SM	A-2, A-3, A-1	0	0-1	80-100	70-100	40-80	5-30	0-14	NP
375F:												
Colton----------	0-1	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	1-3	Gravelly loamy coarse sand	GP-GM, SM	A-1, A-2	0	2-30	50-90	35-80	20-60	2-25	0-10	NP-2
	3-22	Gravelly loamy coarse sand, very gravelly coarse sand, cobbly sand, gravelly loamy fine sand	SP, SM, GP, GM	A-1	0-1	0-25	50-85	35-80	15-50	0-20	0-14	NP
	22-72	Very gravelly coarse sand, very cobbly sand, extremely gravelly coarse sand	GP, GW, GP-GM	A-1	0-1	2-30	45-80	20-50	10-30	0-10	0-14	NP
Adams-----------	0-7	Loamy sand	SP-SM, SM	A-4, A-2, A-3, A-1	0	0	95-100	90-100	45-85	5-40	0-14	NP
	7-9	Sand, loamy sand, loamy fine sand	SM, SP-SM	A-4, A-2	0	0	95-100	90-100	45-85	5-40	15-20	NP-4
	9-27	Loamy sand, sand, loamy fine sand	SM, SP-SM	A-1, A-2, A-3, A-4	0	0	95-100	90-100	45-85	5-40	0-14	NP
	27-72	Fine sand, sand, coarse sand, gravelly sand	SM, SP-SM, SW-SM	A-3, A-1, A-2	0	0-1	80-100	70-100	40-80	5-30	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
651C:												
Monadnock, very bouldery-------	0-2	Fine sandy loam	ML, SM	A-2, A-4	1-7	0-5	90-100	85-100	55-85	30-60	0-18	NP
	2-36	Very fine sandy loam, fine sandy loam, gravelly fine sandy loam	SM, ML	A-2, A-4	0-7	0-15	80-100	70-100	50-85	30-60	0-12	NP
	36-72	Loamy fine sand, gravelly loamy sand, very gravelly loamy sand	SM, SP-SM, SW-SM	A-1, A-2	0-7	0-25	80-100	50-100	20-60	10-30	0-14	NP
Tunbridge, very bouldery-------	0-4	Fine sandy loam	SM, ML	A-4, A-2	1-7	0-10	85-98	75-95	30-90	15-60	0-20	NP-2
	4-26	Gravelly loam, loam, gravelly fine sandy loam, sandy loam, silt loam	SM, ML	A-2, A-5	0-3	0-15	75-95	65-95	25-95	20-85	0-50	NP-6
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Sabattis, undrained; very bouldery-------	0-8	Highly decomposed plant material		A-8	0-7	0	---	---	---	---	---	---
	8-11	Mucky fine sandy loam	CL-ML, OL, SM, ML	A-2, A-4	0-7	0-15	80-100	60-95	50-90	25-85	0-30	NP-10
	11-26	Cobbly sandy loam, gravelly fine sandy loam, silt loam	CL-ML, SM, ML, GM	A-2, A-4	0-4	1-15	80-95	60-95	40-75	20-60	0-30	NP-10
	26-72	Gravelly fine sandy loam, fine sandy loam, cobbly sandy loam, loam	SM, ML, GC-GM, GM	A-2, A-4	1-7	1-16	55-92	50-85	40-75	20-60	0-30	NP-10

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
651D:												
Monadnock, very bouldery-------	0-2	Fine sandy loam	ML, SM	A-2, A-4	1-7	0-5	90-100	85-100	55-85	30-60	0-18	NP
	2-36	Very fine sandy loam, fine sandy loam, gravelly fine sandy loam	SM, ML	A-4, A-2	0-7	0-15	80-100	70-100	50-85	30-60	0-12	NP
	36-72	Loamy fine sand, gravelly loamy sand, very gravelly loamy sand	SW-SM, SM, SP-SM	A-1, A-2	0-7	0-25	80-100	50-100	20-60	10-30	0-14	NP
Tunbridge, very bouldery-------	0-4	Fine sandy loam	SM, ML	A-2, A-4	1-7	0-10	85-98	75-95	30-90	15-60	0-20	NP-2
	4-26	Gravelly loam, loam, gravelly fine sandy loam, sandy loam, silt loam	ML, SM	A-5, A-2	0-3	0-15	75-95	65-95	25-95	20-85	0-50	NP-6
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---
653C:												
Monadnock, very bouldery-------	0-2	Fine sandy loam	ML, SM	A-2, A-4	1-7	0-5	90-100	85-100	55-85	30-60	0-18	NP
	2-36	Very fine sandy loam, fine sandy loam, gravelly fine sandy loam	SM, ML	A-4, A-2	0-7	0-15	80-100	70-100	50-85	30-60	0-12	NP
	36-72	Loamy fine sand, gravelly loamy sand, very gravelly loamy sand	SW-SM, SP-SM, SM	A-1, A-2	0-7	0-25	80-100	50-100	20-60	10-30	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
654C:												
Monadnock, very bouldery-------	0-2	Fine sandy loam	SM, ML	A-2, A-4	1-7	0-5	90-100	85-100	55-85	30-60	0-18	NP
	2-36	Very fine sandy loam, fine sandy loam, gravelly fine sandy loam	ML, SM	A-4, A-2	0-7	0-15	80-100	70-100	50-85	30-60	0-12	NP
	36-72	Loamy fine sand, gravelly loamy sand, very gravelly loamy sand	SM, SP-SM, SW-SM	A-1, A-2	0-7	0-25	80-100	50-100	20-60	10-30	0-14	NP
Sabattis, very bouldery-------	0-8	Highly decomposed plant material		A-8	0-7	0	---	---	---	---	---	---
	8-11	Mucky fine sandy loam	SM, OL, ML, CL-ML	A-2, A-4	0-7	0-15	80-100	60-95	50-90	25-85	0-30	NP-10
	11-26	Cobbly sandy loam, gravelly fine sandy loam, silt loam	CL-ML, GM, ML, SM	A-2, A-4	0-4	1-15	80-95	60-95	40-75	20-60	0-30	NP-10
	26-72	Gravelly fine sandy loam, fine sandy loam, cobbly sandy loam, loam	GC-GM, ML, GM, SM	A-2, A-4	1-7	1-16	55-92	50-85	40-75	20-60	0-30	NP-10
655B:												
Sunapee, very bouldery-------	0-7	Fine sandy loam	CL-ML, ML	A-4, A-6	1-7	0-15	80-95	75-95	50-85	30-65	20-40	2-12
	7-39	Fine sandy loam, gravelly fine sandy loam, sandy loam	ML, SM	A-4, A-2	0-4	0-10	80-95	70-90	50-80	25-60	0-25	NP-3
	39-72	Gravelly fine sandy loam, fine sandy loam, gravelly sandy loam, gravelly loamy sand	ML, SM	A-2, A-4	1-7	0-15	60-95	50-85	40-75	20-50	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Monadnock, very bouldery-------	0-2	Fine sandy loam	SM, ML	A-4, A-2	1-7	0-5	90-100	85-100	55-85	30-60	0-18	NP
	2-36	Very fine sandy loam, fine sandy loam, gravelly fine sandy loam	SM, ML	A-2, A-4	0-7	0-15	80-100	70-100	50-85	30-60	0-12	NP
	36-72	Loamy fine sand, gravelly loamy sand, very gravelly loamy sand	SW-SM, SP-SM, SM	A-1, A-2	0-7	0-25	80-100	50-100	20-60	10-30	0-14	NP
661C:												
Hermon, very bouldery-------	0-6	Fine sandy loam	SM, GM	A-1, A-4, A-2	1-7	0-30	70-98	60-95	30-80	15-45	0-40	NP-10
	6-10	Fine sandy loam, sandy loam, very gravelly coarse sandy loam	GM, SM	A-2, A-4, A-1	0-15	1-30	60-95	50-90	30-80	15-45	0-40	NP-10
	10-37	Very cobbly loamy sand, very gravelly loamy sand, gravelly fine sandy loam, extremely gravelly sandy loam	GM, GP-GM, SM, SP-SM	A-1, A-2, A-4	5-20	10-35	40-80	30-75	15-65	10-40	0-40	NP-10
	37-72	Very cobbly loamy sand, cobbly loamy sand, gravelly loamy sand, very cobbly coarse sand, extremely gravelly sand	SM, GM, GP-GM, SP-SM	A-2, A-3, A-1	5-20	10-35	40-80	35-75	10-55	5-25	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
661D: Hermon, very bouldery-------	0-6	Fine sandy loam	SM, GM	A-2, A-4, A-1	1-7	0-30	70-98	60-95	30-80	15-45	0-40	NP-10
	6-10	Fine sandy loam, sandy loam, very gravelly coarse sandy loam	SM, GM	A-1, A-2, A-4	0-15	1-30	60-95	50-90	30-80	15-45	0-40	NP-10
	10-37	Very cobbly loamy sand, very gravelly loamy sand, gravelly fine sandy loam, extremely gravelly sandy loam	GP-GM, SM, SP-SM, GM	A-1, A-2, A-4	5-20	10-35	40-80	30-75	15-65	10-40	0-40	NP-10
	37-72	Very cobbly loamy sand, cobbly loamy sand, gravelly loamy sand, very cobbly coarse sand, extremely gravelly sand	GM, GP-GM, SM, SP-SM	A-2, A-3, A-1	5-20	10-35	40-80	35-75	10-55	5-25	0-14	NP
708B: Adirondack, very bouldery-------	0-5	Loam	SM, ML	A-4	1-7	0-10	85-100	80-95	45-90	40-80	0-25	NP-3
	5-22	Loam, fine sandy loam, gravelly fine sandy loam, sandy loam	SM, ML	A-4	0-5	0-10	75-100	65-95	40-80	30-70	0-25	NP-3
	22-72	Gravelly fine sandy loam, gravelly sandy loam, gravelly loamy fine sand	SM, GM	A-2-4, A-4	0-7	0-15	65-90	50-85	30-45	25-40	0-25	NP-3

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Sabattis, undrained; very bouldery-------	0-8	Highly decomposed plant material		A-8	0-7	0	---	---	---	---	---	---
	8-11	Mucky fine sandy loam	SM, OL, ML, CL-ML	A-2, A-4	0-7	0-15	80-100	60-95	50-90	25-85	0-30	NP-10
	11-26	Cobbly sandy loam, gravelly fine sandy loam, silt loam	ML, SM, CL-ML, GM	A-2, A-4	0-4	1-15	80-95	60-95	40-75	20-60	0-30	NP-10
	26-72	Gravelly fine sandy loam, fine sandy loam, cobbly sandy loam, loam	GM, GC-GM, ML, SM	A-2, A-4	1-7	1-16	55-92	50-85	40-75	20-60	0-30	NP-10
Tughill, very bouldery-------	0-13	Cobbly mucky fine sandy loam	SM, SC, GM	A-4, A-1-b, A-2	0-7	0-22	65-95	50-95	30-80	15-65	20-30	3-9
	13-37	Very gravelly sandy loam, very gravelly fine sandy loam, very cobbly sandy loam, very gravelly silt loam	GC-GM, GC, GM	A-4, A-1, A-2	0-5	8-30	50-85	30-65	20-55	10-40	20-30	3-9
	37-72	Very gravelly sandy loam, very gravelly fine sandy loam, very cobbly sandy loam, very gravelly silt loam	GM, GC, GC-GM	A-1, A-2, A-4	0-5	5-30	50-85	30-65	15-55	10-40	20-30	3-9

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
721C:												
Becket, very bouldery-------	0-4	Fine sandy loam	SM	A-2, A-4	1-7	0-10	85-98	75-95	60-85	20-50	0-18	NP
	4-23	Fine sandy loam, sandy loam, gravelly sandy loam	SM	A-2, A-4	0-3	0-15	75-98	55-95	50-75	20-45	0-12	NP
	23-72	Gravelly fine sandy loam, cobbly fine sandy loam, sandy loam, loamy sand, gravelly loamy sand	GM, GP-GM, SM, SP-SM	A-2, A-1	1-10	0-20	65-85	50-85	30-70	10-35	0-14	NP
Tunbridge, very bouldery-------	0-4	Fine sandy loam	ML, SM	A-2, A-4	1-7	0-10	85-98	75-95	30-90	15-60	0-20	NP-2
	4-26	Gravelly loam, loam, gravelly fine sandy loam, sandy loam, silt loam	SM, ML	A-2, A-5	0-3	0-15	75-95	65-95	25-95	20-85	0-50	NP-6
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Skerry, very bouldery-------	0-5	Fine sandy loam	SC, SC-SM, SM	A-2, A-4	1-7	0-10	80-95	70-90	45-75	30-50	0-30	NP-10
	5-24	Fine sandy loam, gravelly sandy loam, gravelly fine sandy loam	SC, SC-SM, SM	A-2, A-4	0-4	0-15	75-95	60-95	45-75	20-45	0-25	NP-10
	24-72	Gravelly sandy loam, gravelly fine sandy loam, loamy sand	GM, GP-GM, SM, SP-SM	A-1, A-2	1-7	1-23	60-90	50-85	30-70	10-35	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
721D:												
Becket, very bouldery-------	0-4	Fine sandy loam	SM	A-4, A-2	1-7	0-10	85-98	75-95	60-85	20-50	0-18	NP
	4-23	Fine sandy loam, sandy loam, gravelly sandy loam	SM	A-2, A-4	0-3	0-15	75-98	55-95	50-75	20-45	0-12	NP
	23-72	Gravelly fine sandy loam, cobbly fine sandy loam, sandy loam, loamy sand, gravelly loamy sand	GM, GP-GM, SM, SP-SM	A-1, A-2	1-10	0-20	65-85	50-85	30-70	10-35	0-14	NP
Tunbridge, very bouldery-------	0-4	Fine sandy loam	SM, ML	A-2, A-4	1-7	0-10	85-98	75-95	30-90	15-60	0-20	NP-2
	4-26	Gravelly loam, loam, gravelly fine sandy loam, sandy loam, silt loam	SM, ML	A-2, A-5	0-3	0-15	75-95	65-95	25-95	20-85	0-50	NP-6
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---
723C:												
Becket, very bouldery-------	0-4	Fine sandy loam	SM	A-2, A-4	1-7	0-10	85-98	75-95	60-85	20-50	0-18	NP
	4-23	Fine sandy loam, sandy loam, gravelly sandy loam	SM	A-2, A-4	0-3	0-15	75-98	55-95	50-75	20-45	0-12	NP
	23-72	Gravelly fine sandy loam, cobbly fine sandy loam, sandy loam, loamy sand, gravelly loamy sand	SM, GP-GM, GM, SP-SM	A-1, A-2	1-10	0-20	65-85	50-85	30-70	10-35	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
723D:												
Becket, very bouldery-------	0-4	Fine sandy loam	SM	A-2, A-4	1-7	0-10	85-98	75-95	60-85	20-50	0-18	NP
	4-23	Fine sandy loam, sandy loam, gravelly sandy loam	SM	A-4, A-2	0-3	0-15	75-98	55-95	50-75	20-45	0-12	NP
	23-72	Gravelly fine sandy loam, cobbly fine sandy loam, sandy loam, loamy sand, gravelly loamy sand	SP-SM, SM, GP-GM, GM	A-1, A-2	1-10	0-20	65-85	50-85	30-70	10-35	0-14	NP
725B:												
Skerry, very bouldery-------	0-5	Fine sandy loam	SC, SM, SC-SM	A-4, A-2	1-7	0-10	80-95	70-90	45-75	30-50	0-30	NP-10
	5-24	Fine sandy loam, gravelly sandy loam, gravelly fine sandy loam	SM, SC-SM, SC	A-4, A-2	0-4	0-15	75-95	60-95	45-75	20-45	0-25	NP-10
	24-72	Gravelly sandy loam, gravelly fine sandy loam, loamy sand	GP-GM, GM, SM, SP-SM	A-1, A-2	1-7	1-20	65-90	50-85	30-70	10-35	0-14	NP
Becket, very bouldery-------	0-4	Fine sandy loam	SM	A-2, A-4	1-7	0-10	85-98	75-95	60-85	20-50	0-18	NP
	4-23	Fine sandy loam, sandy loam, gravelly sandy loam	SM	A-2, A-4	0-3	0-15	75-98	55-95	50-75	20-45	0-12	NP
	23-72	Gravelly fine sandy loam, cobbly fine sandy loam, sandy loam, loamy sand, gravelly loamy sand	SM, GP-GM, GM, SP-SM	A-1, A-2	1-10	0-20	65-85	50-85	30-70	10-35	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
727B:												
Skerry, very bouldery-------	0-5	Fine sandy loam	SC, SM, SC-SM	A-2, A-4	1-7	0-10	80-95	70-90	45-75	30-50	0-30	NP-10
	5-24	Fine sandy loam, gravelly sandy loam, gravelly fine sandy loam	SM, SC-SM, SC	A-2, A-4	0-4	0-15	75-95	60-95	45-75	20-45	0-25	NP-10
	24-72	Gravelly sandy loam, gravelly fine sandy loam, loamy sand	SM, SP-SM, GM, GP-GM	A-1, A-2	1-7	1-20	65-90	50-85	30-70	10-35	0-14	NP
Adirondack, very bouldery-------	0-5	Loam	ML, SM	A-4	1-7	0-10	85-100	80-95	45-90	40-80	0-25	NP-3
	5-22	Loam, fine sandy loam, gravelly fine sandy loam, sandy loam	SM, ML	A-4	0-5	0-10	75-100	65-95	40-80	30-70	0-25	NP-3
	22-72	Gravelly fine sandy loam, gravelly sandy loam, gravelly loamy fine sand	GM, SM	A-2-4, A-4	0-7	0-15	65-90	50-85	30-45	25-40	0-25	NP-3
831C:												
Tunbridge, very bouldery-------	0-4	Fine sandy loam	SM, ML	A-2, A-4	1-7	0-10	85-98	75-95	30-90	15-60	0-20	NP-2
	4-26	Gravelly loam, loam, gravelly fine sandy loam, sandy loam, silt loam	SM, ML	A-2, A-5	0-3	0-15	75-95	65-95	25-95	20-85	0-50	NP-6
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Lyman, very bouldery-------	0-3	Highly decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	3-6	Fine sandy loam	ML, SM	A-2, A-4	1-7	0-15	85-98	75-95	55-80	30-55	0-30	NP-6
	6-17	Fine sandy loam, gravelly fine sandy loam, loam, silt loam	ML, SM, GM	A-1, A-2, A-4	0-4	0-15	80-95	60-90	45-75	20-60	0-30	NP-4
	17-25	Unweathered bedrock			---	---	---	---	---	---	---	---
831D:												
Tunbridge, very bouldery-------	0-4	Fine sandy loam	SM, ML	A-2, A-4	1-7	0-10	85-98	75-95	30-90	15-60	0-20	NP-2
	4-26	Gravelly loam, loam, gravelly fine sandy loam, sandy loam, silt loam	SM, ML	A-2, A-5	0-3	0-15	75-95	65-95	25-95	20-85	0-50	NP-6
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Lyman, very bouldery-------	0-3	Highly decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	3-6	Fine sandy loam	SM, ML	A-4, A-2	1-7	0-15	85-98	75-95	55-80	30-55	0-30	NP-6
	6-17	Fine sandy loam, gravelly fine sandy loam, loam, silt loam	ML, GM, SM	A-1, A-2, A-4	0-4	0-15	80-95	60-90	45-75	20-60	0-30	NP-4
	17-25	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
831F:												
Tunbridge, very bouldery-------	0-4	Fine sandy loam	ML, SM	A-2, A-4	1-7	0-10	85-98	75-95	30-90	15-60	0-20	NP-2
	4-26	Gravelly loam, loam, gravelly fine sandy loam, sandy loam, silt loam	SM, ML	A-2, A-5	0-3	0-15	75-95	65-95	25-95	20-85	0-50	NP-6
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Lyman, very bouldery-------	0-3	Highly decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	3-6	Fine sandy loam	ML, SM	A-2, A-4	1-7	0-15	85-98	75-95	55-80	30-55	0-30	NP-6
	6-17	Fine sandy loam, gravelly fine sandy loam, loam, silt loam	GM, ML, SM	A-1, A-2, A-4	0-4	0-15	80-95	60-90	45-75	20-60	0-30	NP-4
	17-25	Unweathered bedrock			---	---	---	---	---	---	---	---
861F:												
Lyman, very bouldery-------	0-3	Highly decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	3-6	Fine sandy loam	ML, SM	A-2, A-4	1-7	0-15	85-98	75-95	55-80	30-55	0-30	NP-6
	6-17	Fine sandy loam, gravelly fine sandy loam, loam, silt loam	ML, SM, GM	A-1, A-2, A-4	0-4	0-15	80-95	60-90	45-75	20-60	0-30	NP-4
	17-25	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Ricker, very bouldery-------	0-3	Peat	PT	A-8	0-7	0	---	---	---	---	---	---
	3-5	Mucky peat	PT	A-8	0-7	0	---	---	---	---	---	---
	5-6	Muck	PT	A-8	0-7	0	---	---	---	---	---	---
	6-7	Loam, very channery coarse sand, very channery silt loam	GM, ML, SM	A-1, A-2, A-4	0-7	0-30	70-100	35-100	25-95	5-75	---	NP
	7-15	Unweathered bedrock			---	---	---	---	---	---	---	---
931C: Mundalite, very bouldery-------	0-1	Highly decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	1-3	Fine sandy loam	ML, CL-ML, SM	A-4, A-2-4	1-7	0-15	80-100	60-98	50-90	30-70	15-27	1-10
	3-27	Fine sandy loam, cobbly fine sandy loam, gravelly sandy loam, loam	CL-ML, SM, ML	A-2-4, A-4	0-4	0-15	70-99	60-98	50-90	30-70	15-27	1-7
	27-37	Very cobbly fine sandy loam, cobbly sandy loam, gravelly fine sandy loam	GC-GM, SM, GM	A-4, A-2-4	1-7	1-30	65-92	40-90	25-65	10-50	15-25	NP-7
	37-72	Very cobbly loamy sand, gravelly loamy sand, cobbly sandy loam	SP-SM, SM	A-2, A-1	1-7	1-30	65-90	40-90	25-60	5-25	10-20	NP-5

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Rawsonville, very bouldery--	0-1	Highly decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	1-3	Loam	ML, SM	A-4, A-5	1-7	0-15	80-100	70-98	55-90	35-70	20-50	NP-10
	3-4	Fine sandy loam	ML, SM	A-4, A-5	1-7	0-15	80-100	70-98	55-90	35-70	20-50	NP-10
	4-22	Loam, fine sandy loam, gravelly fine sandy loam	ML, SM	A-4, A-5	0-5	0-15	80-98	70-95	55-90	35-70	20-50	NP-10
	22-26	Fine sandy loam, loamy fine sand, gravelly loamy fine sand	GM, SC, SM, GC	A-2-4, A-4	0-5	0-15	65-95	55-90	50-90	30-70	15-30	NP-10
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Worden, very bouldery-------	0-4	Fine sandy loam	SM, ML	A-4, A-5, A-2-4	1-7	1-15	85-100	75-95	55-95	30-85	20-50	NP-10
	4-21	Fine sandy loam, loam, gravelly sandy loam	SM, ML, GM	A-2-4, A-4	1-7	1-15	80-100	75-95	55-95	30-85	20-50	NP-10
	21-72	Cobbly fine sandy loam, loam, gravelly fine sandy loam	CL, GC-GM, ML, SM	A-2-4, A-4	1-7	1-15	80-98	60-92	45-85	30-70	0-30	NP-10
931D: Mundalite, very bouldery-------	0-1	Highly decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	1-3	Fine sandy loam	ML, CL-ML, SM	A-2-4, A-4	1-7	0-15	80-100	60-98	50-90	30-70	15-27	1-10
	3-27	Fine sandy loam, cobbly fine sandy loam, gravelly sandy loam, loam	SM, CL-ML, ML	A-2-4, A-4	0-4	0-15	70-99	60-98	50-90	30-70	15-27	1-7

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
	27-37	Very cobbly fine sandy loam, cobbly sandy loam, gravelly fine sandy loam	GC-GM, GM, SM	A-2-4, A-4	1-7	1-30	65-92	40-90	25-65	10-50	15-25	NP-7
	37-72	Very cobbly loamy sand, gravelly loamy sand, cobbly sandy loam	SM, SP-SM	A-1, A-2	1-7	1-30	65-90	40-90	25-60	5-25	10-20	NP-5
Rawsonville, very bouldery--	0-1	Highly decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	1-3	Loam	ML, SM	A-4, A-5	1-7	0-15	80-100	70-98	55-90	35-70	20-50	NP-10
	3-4	Fine sandy loam	ML, SM	A-4, A-5	1-7	0-15	80-100	70-98	55-90	35-70	20-50	NP-10
	4-22	Loam, fine sandy loam, gravelly fine sandy loam	SM, ML	A-4, A-5	0-5	0-15	80-98	70-95	55-90	35-70	20-50	NP-10
	22-26	Fine sandy loam, loamy fine sand, gravelly loamy fine sand	SM, GC, GM, SC	A-4, A-2-4	0-5	0-15	65-95	55-90	50-90	30-70	15-30	NP-10
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---
933C:												
Mundalite, very bouldery-------	0-1	Highly decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	1-3	Fine sandy loam	ML, SM, CL-ML	A-2-4, A-4	1-7	0-15	80-100	60-98	50-90	30-70	15-27	1-10
	3-27	Fine sandy loam, cobbly fine sandy loam, gravelly sandy loam, loam	CL-ML, ML, SM	A-4, A-2-4	0-4	0-15	70-99	60-98	50-90	30-70	15-27	1-7

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
	27-37	Very cobbly fine sandy loam, cobbly sandy loam, gravelly fine sandy loam	GM, GC-GM, SM	A-2-4, A-4	1-7	1-30	65-92	40-90	25-65	10-50	15-25	NP-7
	37-72	Very cobbly loamy sand, gravelly loamy sand, cobbly sandy loam	SM, SP-SM	A-1, A-2	1-7	1-30	65-90	40-90	25-60	5-25	10-20	NP-5
Worden, very bouldery-------	0-4	Fine sandy loam	SM, ML	A-4, A-5, A-2-4	1-7	1-15	85-100	75-95	55-95	30-85	20-50	NP-10
	4-21	Fine sandy loam, loam, gravelly sandy loam	GM, ML, SM	A-2-4, A-4	1-7	1-15	80-100	75-95	55-95	30-85	20-50	NP-10
	21-72	Cobbly fine sandy loam, loam, gravelly fine sandy loam	ML, CL, GC-GM, SM	A-2-4, A-4	1-7	1-15	80-98	60-92	45-85	30-70	0-30	NP-10
941C: Rawsonville, very bouldery--	0-1	Highly decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	1-3	Loam	SM, ML	A-4, A-5	1-7	0-15	80-100	70-98	55-90	35-70	20-50	NP-10
	3-4	Fine sandy loam	SM, ML	A-5, A-4	1-7	0-15	80-100	70-98	55-90	35-70	20-50	NP-10
	4-22	Loam, fine sandy loam, gravelly fine sandy loam	ML, SM	A-4, A-5	0-5	0-15	80-98	70-95	55-90	35-70	20-50	NP-10
	22-26	Fine sandy loam, loamy fine sand, gravelly loamy fine sand	SM, SC, GM, GC	A-2-4, A-4	0-5	0-15	65-95	55-90	50-90	30-70	15-30	NP-10
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Hogback, very bouldery-------	0-1	Fine sandy loam	CL-ML, SM	A-4	1-7	1-25	80-100	65-92	55-90	30-70	18-26	NP-10
	1-6	Loamy fine sand	SM, CL-ML	A-4	1-7	1-25	80-100	65-92	55-90	30-70	18-26	NP-10
	6-14	Fine sandy loam, gravelly fine sandy loam, loam	SM, CL-ML	A-2-4, A-4	0-4	1-25	75-100	65-92	55-90	30-70	15-30	NP-10
	14-22	Unweathered bedrock			---	---	---	---	---	---	---	---
941D:												
Rawsonville, very bouldery--	0-1	Highly decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	1-3	Loam	ML, SM	A-4, A-5	1-7	0-15	80-100	70-98	55-90	35-70	20-50	NP-10
	3-4	Fine sandy loam	SM, ML	A-4, A-5	1-7	0-15	80-100	70-98	55-90	35-70	20-50	NP-10
	4-22	Loam, fine sandy loam, gravelly fine sandy loam	ML, SM	A-4, A-5	0-5	0-15	80-98	70-95	55-90	35-70	20-50	NP-10
	22-26	Fine sandy loam, loamy fine sand, gravelly loamy fine sand	SM, GC, SC, GM	A-2-4, A-4	0-5	0-15	65-95	55-90	50-90	30-70	15-30	NP-10
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Hogback, very bouldery-------	0-1	Fine sandy loam	SM, CL-ML	A-4	1-7	1-25	80-100	65-92	55-90	30-70	18-26	NP-10
	1-6	Loamy fine sand	CL-ML, SM	A-4	1-7	1-25	80-100	65-92	55-90	30-70	18-26	NP-10
	6-14	Fine sandy loam, gravelly fine sandy loam, loam	CL-ML, SM	A-2-4, A-4	0-4	1-25	75-100	65-92	55-90	30-70	15-30	NP-10
	14-22	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
941F:												
Rawsonville, very bouldery--	0-1	Highly decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	1-3	Loam	SM, ML	A-4, A-5	1-7	0-15	80-100	70-98	55-90	35-70	20-50	NP-10
	3-4	Fine sandy loam	SM, ML	A-4, A-5	1-7	0-15	80-100	70-98	55-90	35-70	20-50	NP-10
	4-22	Loam, fine sandy loam, gravelly fine sandy loam	ML, SM	A-4, A-5	0-5	0-15	80-98	70-95	55-90	35-70	20-50	NP-10
	22-26	Fine sandy loam, loamy fine sand, gravelly loamy fine sand	GC, GM, SC, SM	A-2-4, A-4	0-5	0-15	65-95	55-90	50-90	30-70	15-30	NP-10
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Hogback, very bouldery-------	0-1	Fine sandy loam	CL-ML, SM	A-4	1-7	1-25	80-100	65-92	55-90	30-70	18-26	NP-10
	1-6	Loamy fine sand	SM, CL-ML	A-4	1-7	1-25	80-100	65-92	55-90	30-70	18-26	NP-10
	6-14	Fine sandy loam, gravelly fine sandy loam, loam	SM, CL-ML	A-2-4, A-4	0-4	1-25	75-100	65-92	55-90	30-70	15-30	NP-10
	14-22	Unweathered bedrock			---	---	---	---	---	---	---	---
943C:												
Rawsonville, very bouldery--	0-1	Highly decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	1-3	Loam	SM, ML	A-4, A-5	1-7	0-15	80-100	70-98	55-90	35-70	20-50	NP-10
	3-4	Fine sandy loam	SM, ML	A-4, A-5	1-7	0-15	80-100	70-98	55-90	35-70	20-50	NP-10
	4-22	Loam, fine sandy loam, gravelly fine sandy loam	ML, SM	A-4, A-5	0-5	0-15	80-98	70-95	55-90	35-70	20-50	NP-10
	22-26	Fine sandy loam, loamy fine sand, gravelly loamy fine sand	SC, GM, GC, SM	A-2-4, A-4	0-5	0-15	65-95	55-90	50-90	30-70	15-30	NP-10
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Borosaprists----	0-7	Mucky peat	PT	A-8	---	---	---	---	---	---	0-14	---
	7-30	Muck	PT	A-8	---	---	---	---	---	---	0-14	---
	30-72	Fine sandy loam, silt loam, sandy loam, gravelly loam, very gravelly loamy sand	SC, ML, CL, SM	A-2, A-4, A-6	0-2	0-2	75-100	50-100	45-95	25-95	15-30	NP-12
Ricker, very bouldery-------	0-3	Peat	PT	A-8	0-7	0	---	---	---	---	---	---
	3-5	Mucky peat	PT	A-8	0-7	0	---	---	---	---	---	---
	5-6	Muck	PT	A-8	0-7	0	---	---	---	---	---	---
	6-7	Loam, very channery coarse sand, very channery silt loam	GM, SM, ML	A-2, A-4, A-1	0-7	0-30	70-100	35-100	25-95	5-75	---	NP
	7-15	Unweathered bedrock			---	---	---	---	---	---	---	---
945F:												
Hogback, very bouldery-------	0-1	Fine sandy loam	CL-ML, SM	A-4	1-7	1-25	80-100	65-92	55-90	30-70	18-26	NP-10
	1-6	Loamy fine sand	SM, CL-ML	A-4	1-7	1-25	80-100	65-92	55-90	30-70	18-26	NP-10
	6-14	Fine sandy loam, gravelly fine sandy loam, loam	SM, CL-ML	A-2-4, A-4	0-4	1-25	75-100	65-92	55-90	30-70	15-30	NP-10
	14-22	Unweathered bedrock			---	---	---	---	---	---	---	---
Ricker, very bouldery-------	0-3	Peat	PT	A-8	0-7	0	---	---	---	---	---	---
	3-5	Mucky peat	PT	A-8	0-7	0	---	---	---	---	---	---
	5-6	Muck	PT	A-8	0-7	0	---	---	---	---	---	---
	6-7	Loam, very channery coarse sand, very channery silt loam	ML, SM, GM	A-4, A-2, A-1	0-7	0-30	70-100	35-100	25-95	5-75	---	NP
	7-15	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
949F:												
Rock Outcrop----	0-72	Unweathered bedrock			---	---	---	---	---	---	---	---
Ricker, very bouldery-------	0-3	Peat	PT	A-8	0-7	0	---	---	---	---	---	---
	3-5	Mucky peat	PT	A-8	0-7	0	---	---	---	---	---	---
	5-6	Muck	PT	A-8	0-7	0	---	---	---	---	---	---
	6-7	Loam, very channery coarse sand, very channery silt loam	GM, SM, ML	A-1, A-2, A-4	0-7	0-30	70-100	35-100	25-95	5-75	---	NP
	7-15	Unweathered bedrock			---	---	---	---	---	---	---	---
Hogback, very bouldery-------	0-1	Fine sandy loam	SM, CL-ML	A-4	1-7	1-25	80-100	65-92	55-90	30-70	18-26	NP-10
	1-6	Loamy fine sand	CL-ML, SM	A-4	1-7	1-25	80-100	65-92	55-90	30-70	18-26	NP-10
	6-14	Fine sandy loam, gravelly fine sandy loam, loam	SM, CL-ML	A-2-4, A-4	0-4	1-25	75-100	65-92	55-90	30-70	15-30	NP-10
	14-22	Unweathered bedrock			---	---	---	---	---	---	---	---
991D:												
Glebe, very bouldery-------	0-1	Highly decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	1-12	Gravelly coarse sandy loam	ML, SM	A-2-4, A-4, A-5	1-15	1-25	75-95	70-90	45-85	30-55	20-50	NP-10
	12-24	Gravelly fine sandy loam, stony loamy coarse sand, sandy loam	GM, ML, SM	A-5, A-2-4, A-4	1-25	1-25	65-90	55-90	40-75	10-50	20-50	NP-10
	24-32	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
991D:												
Skylight, very bouldery-------	0-2	Moderately decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	2-5	Highly decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	5-9	Loamy sand	SM, SP-SM, SW-SM	A-3, A-2-4, A-1	0-4	0-15	90-100	55-100	30-75	5-30	5-15	NP-3
	9-15	Loamy sand, sand, gravelly sand	SM, SP-SM, SW-SM	A-2-4, A-3, A-1	0-4	0-15	90-100	55-100	30-75	5-30	5-15	NP-3
	15-23	Unweathered bedrock			---	---	---	---	---	---	---	---
997F:												
Ricker, very bouldery-------	0-3	Peat	PT	A-8	0-7	0	---	---	---	---	---	---
	3-5	Mucky peat	PT	A-8	0-7	0	---	---	---	---	---	---
	5-6	Muck	PT	A-8	0-7	0	---	---	---	---	---	---
	6-7	Loam, very channery coarse sand, very channery silt loam	GM, ML, SM	A-4, A-2, A-1	0-7	0-30	70-100	35-100	25-95	5-75	---	NP
	7-15	Unweathered bedrock			---	---	---	---	---	---	---	---
Skylight, very bouldery-------	0-2	Moderately decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	2-5	Highly decomposed plant material	PT	A-8	0-7	0	---	---	---	---	---	---
	5-9	Loamy sand	SM, SP-SM, SW-SM	A-1, A-2-4, A-3	0-4	0-15	90-100	55-100	30-75	5-30	5-15	NP-3
	9-15	Loamy sand, sand, gravelly sand	SW-SM, SP-SM, SM	A-3, A-1, A-2-4	0-4	0-15	90-100	55-100	30-75	5-30	5-15	NP-3
	15-23	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock Outcrop----	0-72	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
AbA:												
Adams-----------	0-7	Loamy sand	SP-SM, SM	A-1, A-2, A-3, A-4	0	0	95-100	90-100	45-85	5-40	0-14	NP
	7-9	Sand, loamy fine sand	SP-SM, SM	A-2, A-4	0	0	95-100	90-100	45-85	5-40	15-20	NP-4
	9-27	Loamy sand, sand, loamy fine sand	SP-SM, SM	A-2, A-4, A-3, A-1	0	0	95-100	90-100	45-85	5-40	0-14	NP
	27-72	Fine sand, sand, coarse sand, gravelly sand	SW-SM, SP-SM, SM	A-2, A-3, A-1	0	0-1	80-100	70-100	40-80	5-30	0-14	NP
AbB:												
Adams-----------	0-7	Loamy sand	SM, SP-SM	A-1, A-2, A-3, A-4	0	0	95-100	90-100	45-85	5-40	0-14	NP
	7-9	Sand, loamy fine sand	SP-SM, SM, SW-SM	A-4, A-2	0	0	95-100	90-100	45-85	5-40	15-20	NP-4
	9-27	Loamy sand, sand, loamy fine sand	SP-SM, SM	A-2, A-3, A-4, A-1	0	0	95-100	90-100	45-85	5-40	0-14	NP
	27-72	Fine sand, sand, coarse sand, gravelly sand	SM, SP-SM, SW-SM	A-1, A-2, A-3	0	0-1	80-100	70-100	40-80	5-30	0-14	NP
AbC:												
Adams-----------	0-7	Loamy sand	SM, SP-SM	A-3, A-2, A-1, A-4	0	0	95-100	90-100	45-85	5-40	0-14	NP
	7-9	Sand, loamy sand, loamy fine sand	SW-SM, SM, SP-SM	A-4, A-2	0	0	95-100	90-100	45-85	5-40	15-20	NP-4
	9-27	Loamy sand, sand, loamy fine sand	SM, SP-SM	A-1, A-4, A-3, A-2	0	0	95-100	90-100	45-85	5-40	0-14	NP
	27-72	Fine sand, sand, coarse sand, gravelly sand	SM, SW-SM, SP-SM	A-3, A-2, A-1	0	0-1	80-100	70-100	40-80	5-30	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
AbD:												
Adams-----------	0-7	Loamy sand	SM, SP-SM	A-2, A-4, A-3, A-1	0	0	95-100	90-100	45-85	5-40	0-14	NP
	7-9	Sand, loamy sand, loamy fine sand	SM, SP-SM, SW-SM	A-4, A-2	0	0	95-100	90-100	45-85	5-40	15-20	NP-4
	9-27	Loamy sand, sand, loamy fine sand	SM, SP-SM	A-2, A-1, A-3, A-4	0	0	95-100	90-100	45-85	5-40	0-14	NP
	27-72	Fine sand, sand, coarse sand, gravelly sand	SW-SM, SP-SM, SM	A-1, A-2, A-3	0	0-1	80-100	70-100	40-80	5-30	0-14	NP
AgB:												
Adirondack------	0-5	Loam	SM, ML	A-4	0-1	0-10	85-100	80-98	55-90	40-80	0-25	NP-3
	5-22	Loam, fine sandy loam, gravelly fine sandy loam, sandy loam	SM, ML	A-4	0-4	0-10	75-98	65-95	40-80	30-70	0-25	NP-3
	22-72	Gravelly fine sandy loam, gravelly sandy loam, gravelly loamy fine sand	SM, GM	A-4, A-2-4	0-7	0-15	65-90	50-85	30-45	25-40	0-25	NP-3
AhB:												
Adirondack, very bouldery-------	0-5	Loam	SM, ML	A-4	1-7	0-10	85-100	80-95	45-90	40-80	0-25	NP-3
	5-22	Loam, fine sandy loam, gravelly fine sandy loam, sandy loam	ML, SM	A-4	0-5	0-10	75-100	65-95	40-80	30-70	0-25	NP-3
	22-72	Gravelly fine sandy loam, gravelly sandy loam, gravelly loamy fine sand	SM, GM	A-4, A-2-4	0-7	0-15	65-90	50-85	30-45	25-40	0-25	NP-3

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Ak:												
Adjidaumo-------	0-7	Silty clay	ML, MH	A-7, A-6	0	0	95-100	95-100	85-100	65-100	35-65	10-25
	7-36	Silty clay, clay, silty clay loam	CH, CL	A-6, A-7	0	0	95-100	95-100	85-100	70-100	38-65	20-35
	36-72	Silty clay, clay, silty clay loam	CH, CL	A-6, A-7	0	0	95-100	95-100	65-100	60-100	35-60	15-35
Am:												
Adjidaumo, mucky silty clay-----	0-7	Mucky silty clay	CL, CH	A-6, A-7-6	0	0	95-100	95-100	90-100	85-95	35-65	15-35
	7-36	Silty clay, clay, silty clay loam	CH, CL	A-7, A-6	0	0	95-100	95-100	85-100	70-100	38-65	20-35
	36-72	Silty clay, clay, silty clay loam	CL, CH	A-7, A-6	---	0	95-100	95-100	65-100	60-100	35-60	15-35
AtA:												
Amenia----------	0-9	Fine sandy loam	ML, SC, CL-ML, SM	A-4	0-1	0-10	85-100	80-95	60-95	35-85	0-30	NP-10
	9-28	Fine sandy loam, gravelly fine sandy loam, loam, silt loam	ML, GM, CL, GC	A-4, A-2	0-1	0-15	75-95	65-95	40-85	25-70	0-30	NP-10
	28-36	Loam, gravelly loam, gravelly fine sandy loam	GC, GM, SC, SM	A-4, A-2	0-7	0-15	75-95	65-95	40-65	25-50	0-30	NP-10
	36-72	Loam, gravelly loam, gravelly fine sandy loam	GM, GC, SM, SC	A-4, A-2	0-7	0-15	75-95	65-95	40-65	25-50	0-30	NP-10
AtB:												
Amenia----------	0-9	Fine sandy loam	ML, SC, CL-ML, SM	A-4	0-1	0-10	85-100	80-95	60-95	35-85	0-30	NP-10
	9-28	Fine sandy loam, gravelly fine sandy loam, loam, silt loam	ML, GM, GC, CL	A-4, A-2	0-1	0-15	75-95	65-95	40-85	25-70	0-30	NP-10

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
AtB:												
Amenia----------	28-36	Loam, gravelly loam, gravelly fine sandy loam	SM, SC, GM, GC	A-2, A-4	0-7	0-15	75-95	65-95	40-65	25-50	0-30	NP-10
	36-72	Loam, gravelly loam, gravelly fine sandy loam	SM, SC, GM, GC	A-2, A-4	0-7	0-15	75-95	65-95	40-65	25-50	0-30	NP-10
AwA:												
Appleton--------	0-10	Loam	SM, ML	A-6, A-7, A-2	0-1	0-15	85-98	65-95	55-95	30-85	35-45	10-15
	10-18	Fine sandy loam, loam, silt loam, gravelly very fine sandy loam	SM, ML, GM, CL-ML	A-4, A-2	0-1	0-15	75-98	60-95	55-90	30-80	25-35	5-10
	18-30	Silt loam, loam, gravelly silt loam, sandy clay loam	SC, CL, GC, GC-GM	A-4	0-1	0-15	70-98	60-95	55-90	35-80	20-30	5-10
	30-72	Loam, gravelly silt loam, fine sandy loam	GC, CL, CL-ML, SC	A-4, A-2	0-7	0-15	65-98	60-95	40-80	30-75	15-25	5-10
AwB:												
Appleton--------	0-10	Loam	ML, SM	A-7, A-2, A-6	0-1	0-15	85-98	65-95	55-95	30-85	35-45	10-15
	10-18	Fine sandy loam, loam, silt loam, gravelly very fine sandy loam	CL-ML, GM, ML, SM	A-2, A-4	0-1	0-15	75-98	60-95	55-90	30-80	25-35	5-10
	18-30	Silt loam, loam, gravelly silt loam, sandy clay loam	GC-GM, CL, GC, SC	A-4	0-1	0-15	70-98	60-95	55-90	35-80	20-30	5-10
	30-72	Loam, gravelly silt loam, fine sandy loam	GC, SC, CL-ML, CL	A-2, A-4	0-7	0-15	65-98	60-95	40-80	30-75	15-25	5-10

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
BcB:												
Becket----------	0-4	Fine sandy loam	SM	A-4, A-2	0-1	0-10	85-98	75-95	60-85	20-50	0-18	NP
	4-23	Fine sandy loam, sandy loam, gravelly sandy loam	SM	A-2, A-4	0-3	0-15	75-98	55-95	50-75	20-45	0-12	NP
	23-72	Gravelly fine sandy loam, cobbly fine sandy loam, sandy loam, loamy sand, gravelly loamy sand	SP-SM, GM, GP-GM, SM	A-1, A-2	1-10	0-20	65-85	50-85	30-70	10-35	0-14	NP
BcC:												
Becket----------	0-4	Fine sandy loam	SM	A-4, A-2	0-1	0-10	85-98	75-95	60-85	20-50	0-18	NP
	4-23	Fine sandy loam, sandy loam, gravelly sandy loam	SM	A-4, A-2	0-3	0-15	75-98	55-95	50-75	20-45	0-12	NP
	23-72	Gravelly fine sandy loam, cobbly fine sandy loam, sandy loam, loamy sand, gravelly loamy sand	SP-SM, SM, GP-GM, GM	A-2, A-1	1-10	0-20	65-85	50-85	30-70	10-35	0-14	NP
BeC:												
Becket, very bouldery-------	0-4	Fine sandy loam	SM	A-4, A-2	1-7	0-10	85-98	75-95	60-85	20-50	0-18	NP
	4-23	Fine sandy loam, sandy loam, gravelly sandy loam	SM	A-4, A-2	0-3	0-15	75-98	55-95	50-75	20-45	0-12	NP
	23-72	Gravelly fine sandy loam, cobbly fine sandy loam, sandy loam, loamy sand, gravelly loamy sand	SP-SM, SM, GP-GM, GM	A-1, A-2	1-10	0-20	65-85	50-85	30-70	10-35	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
BeD:												
Becket, very bouldery-------	0-4	Fine sandy loam	SM	A-2, A-4	1-7	0-10	85-98	75-95	60-85	20-50	0-18	NP
	4-23	Fine sandy loam, sandy loam, gravelly sandy loam	SM	A-2, A-4	0-3	0-15	75-98	55-95	50-75	20-45	0-12	NP
	23-72	Gravelly fine sandy loam, cobbly fine sandy loam, sandy loam, loamy sand, gravelly loamy sand	SM, GP-GM, GM, SP-SM	A-1, A-2	1-10	0-20	65-85	50-85	30-70	10-35	0-14	NP
BgC:												
Becket, very bouldery-------	0-4	Fine sandy loam	SM	A-2, A-4	1-7	0-10	85-98	75-95	60-85	20-50	0-18	NP
	4-23	Fine sandy loam, sandy loam, gravelly sandy loam	SM	A-2, A-4	0-3	0-15	75-98	55-95	50-75	20-45	0-12	NP
	23-72	Gravelly fine sandy loam, cobbly fine sandy loam, sandy loam, loamy sand, gravelly loamy sand	GP-GM, GM, SM, SP-SM	A-2, A-1	1-10	0-20	65-85	50-85	30-70	10-35	0-14	NP
Tunbridge, very bouldery-------	0-4	Fine sandy loam	SM, ML	A-2, A-4	1-7	0-10	85-98	75-95	30-90	15-60	0-20	NP-2
	4-26	Gravelly loam, loam, gravelly fine sandy loam, sandy loam, silt loam	SM, ML	A-2, A-5	0-3	0-15	75-95	65-95	25-95	20-85	0-50	NP-6
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
BgE:												
Becket, very bouldery-------	0-4	Fine sandy loam	SM	A-2, A-4	1-7	0-10	85-98	75-95	60-85	20-50	0-18	NP
	4-23	Fine sandy loam, sandy loam, gravelly sandy loam	SM	A-2, A-4	0-3	0-15	75-98	55-95	50-75	20-45	0-12	NP
	23-72	Gravelly fine sandy loam, cobbly fine sandy loam, sandy loam, loamy sand, gravelly loamy sand	SP-SM, GM, GP-GM, SM	A-1, A-2	1-10	0-20	65-85	50-85	30-70	10-35	0-14	NP
Tunbridge, very bouldery-------	0-4	Fine sandy loam	ML, SM	A-2, A-4	1-7	0-10	85-98	75-95	30-90	15-60	0-20	NP-2
	4-26	Gravelly loam, loam, gravelly fine sandy loam, sandy loam, silt loam	ML, SM	A-2, A-5	0-3	0-15	75-95	65-95	25-95	20-85	0-50	NP-6
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---
BhC:												
Benson----------	0-6	Loam	CL, CL-ML, ML	A-4, A-6	0-1	0-7	90-100	85-95	70-95	50-90	20-40	NP-18
	6-14	Channery silty clay loam, very channery silty clay loam, very channery loam, channery loam	CL, GM, ML, SM	A-1, A-2, A-4, A-6	0-5	0-30	40-85	35-80	30-80	20-75	20-40	NP-18
	14-18	Extremely channery silty clay loam	GM, ML, CL	A-6, A-4, A-2	0-5	1-30	40-85	35-80	30-80	30-80	20-40	NP-18
	18-26	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
BhE:												
Benson----------	0-6	Loam	CL, CL-ML, ML	A-6, A-4	0-1	0-7	90-100	85-95	70-95	50-90	20-40	NP-18
	6-14	Channery silty clay loam, very channery silty clay loam, very channery loam, channery loam	SM, ML, GM, CL	A-6, A-1, A-2, A-4	0-5	0-30	40-85	35-80	30-80	20-75	20-40	NP-18
	14-18	Extremely channery silty clay loam	GM, ML, CL	A-2, A-6, A-4	0-5	1-30	40-85	35-80	30-80	30-80	20-40	NP-18
	18-26	Unweathered bedrock			---	---	---	---	---	---	---	---
Bo:												
Beseman---------	0-2	Peat	PT	A-8	0	0	---	---	---	---	---	---
	2-10	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	10-45	Muck	PT	A-8	0	0	---	---	---	---	---	---
	45-72	Fine sandy loam, sandy loam, loam	CL, SM, ML, SC	A-4, A-6, A-2	0-2	0-2	80-100	70-100	55-95	25-75	15-30	NP-12
BrB:												
Bice------------	0-11	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0-10	90-100	80-95	50-85	25-80	0-25	NP-5
	11-26	Fine sandy loam, gravelly fine sandy loam, gravelly sandy loam, gravelly loam	ML, SM	A-1-b, A-2, A-4	0-1	0-15	85-100	80-98	40-80	20-65	0-25	NP-3
	26-72	Gravelly fine sandy loam, gravelly sandy loam, loam	SM, GM	A-1-b, A-2, A-4	0-6	0-15	70-90	60-85	40-75	20-50	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
BrC:												
Bice------------	0-11	Fine sandy loam	SC-SM, CL-ML, ML, SM	A-4, A-2	0	0-10	90-100	80-95	50-85	25-80	0-25	NP-5
	11-26	Fine sandy loam, gravelly fine sandy loam, gravelly sandy loam, gravelly loam	SM, ML	A-1-b, A-2, A-4	0-1	0-15	85-100	80-98	40-80	20-65	0-25	NP-3
	26-72	Gravelly fine sandy loam, gravelly sandy loam, loam	GM, SM	A-1-b, A-2, A-4	0-6	0-15	70-90	60-85	40-75	20-50	0-14	NP
BsC:												
Bice, very stony	0-11	Fine sandy loam	CL-ML, SC-SM, SM, ML	A-2, A-4	1-7	0-10	90-100	80-95	50-85	25-80	0-25	NP-5
	11-26	Fine sandy loam, gravelly fine sandy loam, gravelly sandy loam, gravelly loam	ML, SM	A-2, A-1-b, A-4	0-1	0-15	85-100	80-98	40-80	20-65	0-25	NP-3
	26-72	Gravelly fine sandy loam, gravelly sandy loam, loam	GM, SM	A-1-b, A-4, A-2	0-7	0-15	70-90	60-85	40-75	20-50	0-14	NP
BsD:												
Bice, very stony	0-11	Fine sandy loam	CL-ML, SM, ML, SC-SM	A-4, A-2	1-7	0-10	90-100	80-95	50-85	25-80	0-25	NP-5
	11-26	Fine sandy loam, gravelly fine sandy loam, gravelly sandy loam, gravelly loam	SM, ML	A-1-b, A-2, A-4	0-1	0-15	85-100	80-98	40-80	20-65	0-25	NP-3
	26-72	Gravelly fine sandy loam, gravelly sandy loam, loam	GM, SM	A-2, A-1-b, A-4	0-7	0-15	70-90	60-85	40-75	20-50	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
BvB:												
Bombay----------	0-9	Loam	ML, SM	A-4, A-2	0-1	0-5	80-100	75-92	55-90	30-90	30-40	3-11
	9-23	Very fine sandy loam, fine sandy loam, gravelly loam, gravelly fine sandy loam, silt loam	CL, CL-ML, SC-SM, SM	A-2, A-4	0-1	0-5	70-95	60-92	50-85	30-80	15-30	1-10
	23-56	Fine sandy loam, gravelly loam, gravelly fine sandy loam, silt loam	SM, SC-SM, CL-ML, CL	A-4, A-2	0-1	0-5	70-95	60-92	50-85	30-80	15-30	1-10
	56-72	Gravelly fine sandy loam, gravelly loam	CL-ML, GM, SM, SC-SM	A-4, A-2-4	0-4	0-12	65-85	60-80	40-70	30-60	0-20	NP-5
Bx:												
Bucksport-------	0-7	Mucky peat	PT	A-8	0	0	---	---	---	---	0-14	---
	7-47	Muck, mucky peat	PT	A-8	0	0	---	---	---	---	0-14	---
	47-72	Muck	PT	A-8	0	0	---	---	---	---	0-14	---
CgA:												
Champlain-------	0-2	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-10	Fine sand	SM, SP-SM	A-2	0	0	100	90-100	50-85	5-40	0-14	NP
	10-33	Fine sand, loamy fine sand, sand	SM, SP-SM	A-2	0	0	92-100	90-100	45-80	5-35	0-14	NP
	33-72	Sand, fine sand, loamy fine sand	SM, SP-SM	A-2	0	0	90-100	85-100	45-70	5-30	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
CgB:												
Champlain-------	0-2	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-10	Fine sand	SM, SP-SM	A-2	0	0	100	90-100	50-85	5-40	0-14	NP
	10-33	Fine sand, loamy fine sand, sand	SP-SM, SM	A-2	0	0	92-100	90-100	45-80	5-35	0-14	NP
	33-72	Sand, fine sand, loamy fine sand	SP-SM, SM	A-2	0	0	90-100	85-100	45-70	5-30	0-14	NP
CgC:												
Champlain-------	0-2	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-10	Fine sand	SP-SM, SM	A-2	0	0	100	90-100	50-85	5-40	0-14	NP
	10-33	Fine sand, loamy fine sand, sand	SM, SP-SM	A-2	0	0	92-100	90-100	45-80	5-35	0-14	NP
	33-72	Sand, fine sand, loamy fine sand	SP-SM, SM	A-2	0	0	90-100	85-100	45-70	5-30	0-14	NP
ChF:												
Champlain-------	0-2	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	2-10	Fine sand	SM, SP-SM	A-2	0	0	100	90-100	50-85	5-40	0-14	NP
	10-33	Fine sand, loamy fine sand, sand	SP-SM, SM	A-2	0	0	92-100	90-100	45-80	5-35	0-14	NP
	33-72	Sand, fine sand, loamy fine sand	SM, SP-SM	A-2	0	0	90-100	85-100	45-70	5-30	0-14	NP
Adams-----------	0-7	Loamy sand	SP-SM, SM	A-3, A-1, A-4, A-2	0	0	95-100	90-100	45-85	5-40	0-14	NP
	7-9	Sand, loamy sand, loamy fine sand	SM, SP-SM, SW-SM	A-2, A-4	0	0	95-100	90-100	45-85	5-40	15-20	NP-4
	9-27	Loamy sand, sand, loamy fine sand	SP-SM, SM	A-1, A-2, A-3, A-4	0	0	95-100	90-100	45-85	5-40	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
	27-72	Fine sand, sand, coarse sand, gravelly sand	SM, SP-SM, SW-SM	A-1, A-2, A-3	0	0-1	80-100	70-100	40-80	5-30	0-14	NP
Ck:												
Churubusco------	0-2	Muck	PT	A-8	0	0	---	---	---	---	0-14	---
	2-32	Muck	PT	A-8	0	0	---	---	---	---	0-14	---
	32-40	Unweathered bedrock			---	---	---	---	---	---	0-14	---
ClC:												
Colosse, very stony----------	0-2	Moderately decomposed plant material	PT	A-8	0-5	0	---	---	---	---	---	---
	2-6	Very cobbly fine sandy loam	GM	A-4, A-2	1-5	5-30	55-85	45-70	35-55	15-40	0-14	NP
	6-30	Very cobbly fine sandy loam, very gravelly sandy loam, gravelly fine sandy loam	SM, GM	A-4, A-1, A-2	0-15	5-40	45-85	30-75	20-55	10-40	20-25	NP-4
	30-72	Stratified extremely cobbly loamy sand, stratified extremely cobbly sand	GW	A-1	0-15	5-40	45-70	20-50	10-30	0-15	0-14	NP
Hermon, very stony----------	0-6	Fine sandy loam	SM, GM	A-4, A-2, A-1	1-7	0-30	70-98	60-95	30-80	15-45	0-40	NP-10
	6-10	Fine sandy loam, sandy loam, very gravelly coarse sandy loam	SM, GM	A-4, A-2, A-1	0-15	1-30	60-95	50-90	30-80	15-45	0-40	NP-10

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
	10-37	Very cobbly loamy sand, very gravelly loamy sand, gravelly fine sandy loam, extremely gravelly sandy loam	GM, SP-SM, GP-GM, SM	A-4, A-1, A-2	5-20	10-35	40-80	30-75	15-65	10-40	0-40	NP-10
	37-72	Very cobbly loamy sand, cobbly loamy sand, gravelly loamy sand, very cobbly coarse sand, extremely gravelly sand	SM, GM, GP-GM, SP-SM	A-1, A-2, A-3	5-20	10-35	40-80	35-75	10-55	5-25	0-14	NP
CmB:												
Colosse---------	0-2	Moderately decomposed plant material	PT	A-8	0-1	0	---	---	---	---	---	---
	2-6	Very cobbly fine sandy loam	GM	A-2, A-4	0-1	5-30	55-85	45-70	35-55	15-40	0-14	NP
	6-30	Very cobbly fine sandy loam, very gravelly sandy loam, gravelly fine sandy loam	GM, SM	A-1, A-2, A-4	0-15	5-40	45-85	30-75	20-55	10-40	20-25	NP-4
	30-72	Stratified extremely cobbly loamy sand, stratified extremely cobbly sand	GW	A-1	0-15	5-40	45-70	20-50	10-30	0-15	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
Trout River-----	0-1	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	1-3	Very gravelly loamy sand	GM, SP-SM, SM, GP-GM	A-2, A-1, A-3	0-1	0-15	65-92	50-85	25-65	0-45	0-14	NP
	3-6	Very gravelly loamy sand	GM, SP-SM, SM, GP-GM	A-1, A-2, A-3	0-1	0-15	65-92	50-85	25-65	0-45	0-14	NP
	6-31	Very gravelly loamy sand, extremely gravelly sand, gravelly loamy sand	GP, SP-SM, GP-GM, GW	A-1, A-2, A-3	0-1	1-30	50-85	30-70	20-55	0-35	0-14	NP
	31-72	Extremely gravelly sand, very gravelly sand, very cobbly sand	GP, GP-GM, GW	A-1	0-2	5-30	40-75	20-50	10-30	0-15	0-14	NP
CmC:												
Colosse---------	0-2	Moderately decomposed plant material	PT	A-8	0-1	0	---	---	---	---	---	---
	2-6	Very cobbly fine sandy loam	GM	A-4, A-2	0-1	5-30	55-85	45-70	35-55	15-40	0-14	NP
	6-30	Very cobbly fine sandy loam, very gravelly sandy loam, gravelly fine sandy loam	SM, GM	A-1, A-2, A-4	0-15	5-40	45-85	30-75	20-55	10-40	20-25	NP-4
	30-72	Stratified extremely cobbly loamy sand, stratified extremely cobbly sand	GW	A-1	0-15	5-40	45-70	20-50	10-30	0-15	0-14	NP
Trout River-----	0-1	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	1-3	Very gravelly loamy sand	SM, GP-GM, GM, SP-SM	A-1, A-2, A-3	0-1	0-15	65-92	50-85	25-65	0-45	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
	3-6	Very gravelly loamy sand	GM, GP-GM, SM, SP-SM	A-1, A-2, A-3	0-1	0-15	65-92	50-85	25-65	0-45	0-14	NP
	6-31	Very gravelly loamy sand, extremely gravelly sand, gravelly loamy sand	GP-GM, SP-SM, GP, GW	A-3, A-1, A-2	0-1	1-30	50-85	30-70	20-55	0-35	0-14	NP
	31-72	Extremely gravelly sand, very gravelly sand, very cobbly sand	GP, GP-GM, GW	A-1	0-2	5-30	40-75	20-50	10-30	0-15	0-14	NP
CnC: Colosse, very stony----------	0-2	Moderately decomposed plant material	PT	A-8	0-5	0	---	---	---	---	---	---
	2-6	Very cobbly fine sandy loam	GM	A-2, A-4	1-5	5-30	55-85	45-70	35-55	15-40	0-14	NP
	6-30	Very cobbly fine sandy loam, very gravelly sandy loam, gravelly fine sandy loam	SM, GM	A-1, A-2, A-4	0-15	5-40	45-85	30-75	20-55	10-40	20-25	NP-4
	30-72	Stratified extremely cobbly loamy sand, stratified extremely cobbly sand	GW	A-1	0-15	5-40	45-70	20-50	10-30	0-15	0-14	NP
Trout River, very stony-----	0-1	Moderately decomposed plant material		A-8	0-5	---	---	---	---	---	---	---
	1-3	Very gravelly loamy sand	GM, SP-SM, SM, GP-GM	A-1, A-2, A-3	1-5	0-15	65-92	50-85	25-65	0-45	0-14	NP
	3-6	Very gravelly loamy sand	GM, SP-SM, SM, GP-GM	A-3, A-2, A-1	0-1	0-15	65-92	50-85	25-65	0-45	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
	6-31	Very gravelly loamy sand, extremely gravelly sand, gravelly loamy sand	GP-GM, GW, SP-SM, GP	A-2, A-1, A-3	0-1	1-30	50-85	30-70	20-55	0-35	0-14	NP
	31-72	Extremely gravelly sand, very gravelly sand, very cobbly sand	GP-GM, GW, GP	A-1	0-2	5-30	40-75	20-50	10-30	0-15	0-14	NP
CnD:												
Colosse, very stony----------	0-2	Moderately decomposed plant material	PT	A-8	0-5	0	---	---	---	---	---	---
	2-6	Very cobbly fine sandy loam	GM	A-4, A-2	1-5	5-30	55-85	45-70	35-55	15-40	0-14	NP
	6-30	Very cobbly fine sandy loam, very gravelly sandy loam, gravelly fine sandy loam	SM, GM	A-1, A-2, A-4	0-15	5-40	45-85	30-75	20-55	10-40	20-25	NP-4
	30-72	Stratified extremely cobbly loamy sand, stratified extremely cobbly sand	GW	A-1	0-15	5-40	45-70	20-50	10-30	0-15	0-14	NP
Trout River, very stony-----	0-1	Moderately decomposed plant material		A-8	0-5	---	---	---	---	---	---	---
	1-3	Very gravelly loamy sand	GM, SM, SP-SM, GP-GM	A-1, A-2, A-3	1-5	0-15	65-92	50-85	25-65	0-45	0-14	NP
	3-6	Very gravelly loamy sand	SP-SM, SM, GP-GM, GM	A-1, A-2, A-3	0-1	0-15	65-92	50-85	25-65	0-45	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
	6-31	Very gravelly loamy sand, extremely gravelly sand, gravelly loamy sand	GW, GP-GM, GP, SP-SM	A-1, A-2, A-3	0-1	1-30	50-85	30-70	20-55	0-35	0-14	NP
	31-72	Extremely gravelly sand, very gravelly sand, very cobbly sand	GP, GP-GM, GW	A-1	0-2	5-30	40-75	20-50	10-30	0-15	0-14	NP
CoA:												
Colton----------	0-1	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	1-3	Gravelly loamy coarse sand	SM, GP-GM	A-1, A-2	0	2-30	50-90	35-80	20-60	2-25	0-10	NP-2
	3-22	Gravelly loamy coarse sand, very gravelly coarse sand, cobbly sand, gravelly loamy fine sand	SP, GM, GP, SM	A-1	0-1	0-25	50-85	35-80	15-50	0-20	0-14	NP
	22-72	Very gravelly coarse sand, very cobbly sand, extremely gravelly coarse sand	GP-GM, GW, GP	A-1	0-1	2-30	45-80	20-50	10-30	0-10	0-14	NP
CoB:												
Colton----------	0-1	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	1-3	Gravelly loamy coarse sand	SM, GP-GM	A-1, A-2	0	2-30	50-90	35-80	20-60	2-25	0-10	NP-2
	3-22	Gravelly loamy coarse sand, very gravelly coarse sand, cobbly sand, gravelly loamy fine sand	GM, GP, SM, SP	A-1	0-1	0-25	50-85	35-80	15-50	0-20	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
	22-72	Very gravelly coarse sand, very cobbly sand, extremely gravelly coarse sand	GP, GP-GM, GW	A-1	0-1	2-30	45-80	20-50	10-30	0-10	0-14	NP
CoC:												
Colton----------	0-1	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	1-3	Gravelly loamy coarse sand	GP-GM, SM	A-1, A-2	0	2-30	50-90	35-80	20-60	2-25	0-10	NP-2
	3-22	Gravelly loamy coarse sand, very gravelly coarse sand, cobbly sand, gravelly loamy fine sand	SM, SP, GM, GP	A-1	0-1	0-25	50-85	35-80	15-50	0-20	0-14	NP
	22-72	Very gravelly coarse sand, very cobbly sand, extremely gravelly coarse sand	GP-GM, GP, GW	A-1	0-1	2-30	45-80	20-50	10-30	0-10	0-14	NP
CpC:												
Colton, very stony----------	0-1	Highly decomposed plant material	PT	A-8	0-5	0	---	---	---	---	---	---
	1-3	Gravelly loamy coarse sand	SM, GP-GM	A-2, A-1	1-7	2-30	50-90	35-80	20-60	2-25	0-10	NP-2
	3-22	Gravelly loamy coarse sand, very gravelly coarse sand, cobbly sand, gravelly loamy fine sand	SP, SM, GM, GP	A-1	0-1	0-25	50-85	35-80	15-50	0-20	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
	22-72	Very gravelly coarse sand, very cobbly sand, extremely gravelly coarse sand	GW, GP, GP-GM	A-1	0-1	2-30	45-80	20-50	10-30	0-10	0-14	NP
CpE: Colton, very stony----------	0-1	Highly decomposed plant material	PT	A-8	0-5	0	---	---	---	---	---	---
	1-3	Gravelly loamy coarse sand	SM, GP-GM	A-1, A-2	1-7	2-30	50-90	35-80	20-60	2-25	0-10	NP-2
	3-22	Gravelly loamy coarse sand, very gravelly coarse sand, cobbly sand, gravelly loamy fine sand	SP, GM, SM, GP	A-1	0-1	0-25	50-85	35-80	15-50	0-20	0-14	NP
	22-72	Very gravelly coarse sand, very cobbly sand, extremely gravelly coarse sand	GP, GW, GP-GM	A-1	0-1	2-30	45-80	20-50	10-30	0-10	0-14	NP
Crk: Cook------------	0-7	Mucky loamy fine sand	SM	A-1-b, A-2	0	0-10	80-95	75-90	40-75	15-50	0-14	NP
	7-23	Gravelly sand, loamy fine sand, gravelly loamy sand	SP-SM, SP, SM	A-3, A-2, A-1	0	0-15	65-95	55-90	25-60	2-30	0-14	NP
	23-72	Gravelly fine sandy loam, gravelly sandy loam, very gravelly fine sandy loam, loam	ML, GM, SM	A-2, A-4	1-7	1-15	65-90	45-85	30-70	30-60	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Crr:												
Cornish---------	0-8	Silt loam	CL, CL-ML, ML	A-6, A-4	0	0	100	92-100	85-100	60-90	0-40	NP-15
	8-28	Silt loam, very fine sandy loam	CL-ML, CL, ML	A-6, A-4	0	0	100	92-100	85-100	60-90	0-40	NP-15
	28-72	Silt loam, very fine sandy loam, loamy very fine sand	ML, CL-ML, CL	A-4, A-6	0	0	100	92-100	85-100	50-90	0-40	NP-15
Cs:												
Covert----------	0-3	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-6	Loamy sand	SM, SP-SM	A-2-4	0	0	95-100	90-100	50-70	10-30	0-20	NP-4
	6-8	Loamy sand, sand	SM, SP-SM	A-2-4	0	0	95-100	90-100	50-70	10-30	0-14	NP
	8-30	Sand	SM, SP-SM	A-2-4	0	0	95-100	90-100	50-70	10-30	0-14	NP
	30-37	Loamy sand, sand	SM	A-3, A-2-4	0	0	95-100	90-100	50-70	5-30	0-14	NP
	37-72	Sand, fine sand	SM	A-2-4, A-3	0	0	95-100	90-100	50-70	5-30	0-14	NP
CtsA:												
Covertfalls-----	0-8	Loamy fine sand	SM	A-2, A-1-b	0	0-1	95-100	85-100	40-75	15-35	0-14	NP
	8-20	Loamy fine sand, loamy sand, fine sand	SM	A-2	0	0-15	80-100	65-100	40-75	15-35	0-14	NP
	20-26	Loamy fine sand, loamy sand, fine sand	SM	A-2	0	0-15	80-100	65-100	40-75	15-35	0-14	NP
	26-72	Cobbly loam, cobbly fine sandy loam, loam	CL-ML, ML, SM, SC-SM	A-2, A-4	0-7	1-20	75-95	50-90	45-85	30-70	15-20	1-5
CtsB:												
Covertfalls-----	0-8	Loamy fine sand	SM	A-1-b, A-2	0	0-1	95-100	85-100	40-75	15-35	0-14	NP
	8-20	Loamy fine sand, loamy sand, fine sand	SM	A-2	0	0-15	80-100	65-100	40-75	15-35	0-14	NP
	20-26	Loamy fine sand, loamy sand, fine sand	SM	A-2	0	0-15	80-100	65-100	40-75	15-35	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
CtsB:												
Covertfalls----	26-72	Cobbly loam, cobbly fine sandy loam, loam	ML, SC-SM, SM, CL-ML	A-4, A-2	0-7	1-20	75-95	50-90	45-85	30-70	15-20	1-5
CttB:												
Covertfalls, gravelly-------	0-8	Gravelly loamy fine sand	SM	A-1-b, A-2	0-1	0-15	70-92	55-80	30-75	10-35	0-14	NP
	8-20	Loamy fine sand, loamy sand, fine sand	SM	A-2	0	0-15	80-100	65-100	40-75	15-35	0-14	NP
	20-26	Loamy fine sand, loamy sand, fine sand	SM	A-2	0	0-15	80-100	65-100	40-75	15-35	0-14	NP
	26-72	Cobbly loam, cobbly fine sandy loam, loam	ML, CL-ML, SC-SM, SM	A-4, A-2	0-7	1-20	75-95	50-90	45-85	30-70	15-20	1-5
CvA:												
Coveytown-------	0-8	Loamy sand	SP-SM, SM	A-3, A-2, A-1	0	0-10	80-100	75-90	35-70	5-35	0-14	NP
	8-28	Sand, loamy fine sand, gravelly loamy sand	SP, SM, GP, GM	A-1, A-2, A-3	0	0-5	65-100	60-95	25-70	2-35	0-14	NP
	28-72	Gravelly fine sandy loam, gravelly sandy loam, gravelly loam	SM, GM	A-4, A-2	0-7	0-10	65-85	55-85	40-60	25-45	20-25	NP-5
CvB:												
Coveytown-------	0-8	Loamy sand	SP-SM, SM	A-1, A-2, A-3	0	0-10	80-100	75-90	35-70	5-35	0-14	NP
	8-28	Sand, loamy fine sand, gravelly loamy sand	GM, SM, GP, SP	A-1, A-2, A-3	0	0-5	65-100	60-95	25-70	2-35	0-14	NP
	28-72	Gravelly fine sandy loam, gravelly sandy loam, gravelly loam	SM, GM	A-2, A-4	0-7	0-10	65-85	55-85	40-60	25-45	20-25	NP-5

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
CwB:												
Coveytown, very stony----------	0-8	Loamy sand	SM, SP-SM	A-2, A-3, A-1	1-7	0-10	80-100	75-90	35-70	5-35	0-14	NP
	8-28	Sand, loamy fine sand, gravelly loamy sand	SP, GM, GP, SM	A-3, A-1, A-2	0	0-5	65-100	60-95	25-70	2-35	0-14	NP
	28-72	Gravelly fine sandy loam, gravelly sandy loam, gravelly loam	SM, GM	A-4, A-2	0-7	0-10	65-85	55-85	40-60	25-45	20-25	NP-5
CxA:												
Croghan---------	0-1	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	1-3	Loamy fine sand	SW-SM, SM, SP-SM	A-4, A-1, A-2, A-3	0	0	95-100	95-100	45-80	5-40	0-14	NP
	3-9	Fine sand	SM, SW-SM, SP-SM	A-2, A-3, A-4, A-1	0	0	95-100	95-100	45-80	5-40	0-14	NP
	9-33	Fine sand, sand, loamy sand	SP-SM, SM, SW-SM	A-4, A-3, A-2, A-1	0	0	85-100	80-100	45-80	5-40	0-14	NP
	33-72	Fine sand, loamy sand, coarse sand	SM, SP-SM, SW-SM	A-2, A-1, A-3	0	0	85-100	80-100	45-80	5-35	0-14	NP
CxB:												
Croghan---------	0-1	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	1-3	Loamy fine sand	SM, SP-SM, SW-SM	A-1, A-2, A-3, A-4	0	0	95-100	95-100	45-80	5-40	0-14	NP
	3-9	Fine sand	SM, SP-SM, SW-SM	A-1, A-2, A-3, A-4	0	0	95-100	95-100	45-80	5-40	0-14	NP
	9-33	Fine sand, sand, loamy sand	SM, SW-SM, SP-SM	A-4, A-1, A-2, A-3	0	0	85-100	80-100	45-80	5-40	0-14	NP
	33-72	Fine sand, loamy sand, coarse sand	SP-SM, SM, SW-SM	A-3, A-2, A-1	0	0	85-100	80-100	45-80	5-35	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
DeA:												
Deerfield-------	0-6	Fine sand	SM	A-2, A-4	0	0	95-100	80-100	40-80	5-40	0-14	NP
	6-31	Fine sand, loamy fine sand, loamy sand	SM, SP-SM	A-1, A-2, A-3	0	0	95-100	80-100	40-80	5-40	0-14	NP
	31-72	Fine sand, sand, coarse sand	SM, SP-SM	A-3, A-1, A-2	0	0	85-100	70-100	40-70	5-30	0-14	NP
DeB:												
Deerfield-------	0-6	Fine sand	SM	A-4, A-2	0	0	95-100	80-100	40-80	5-40	0-14	NP
	6-31	Fine sand, loamy fine sand, loamy sand	SM, SP-SM	A-3, A-1, A-2	0	0	95-100	80-100	40-80	5-40	0-14	NP
	31-72	Fine sand, sand, coarse sand	SP-SM, SM	A-3, A-2, A-1	0	0	85-100	70-100	40-70	5-30	0-14	NP
Df:												
Deinache--------	0-9	Fine sand	SM	A-2-4	0	0	100	98-100	60-85	15-45	0-14	NP
	9-44	Fine sand, loamy fine sand	SM	A-2-4, A-4	0	0	100	98-100	60-80	15-40	0-14	NP
	44-72	Loamy very fine sand, very fine sandy loam, silt loam, fine sand	ML, SM	A-4, A-2-4	0	0	100	95-100	85-100	30-90	0-25	NP-4
FeB:												
Fahey, loamy substratum-----	0-9	Gravelly fine sandy loam	SM, SP-SM	A-4, A-1, A-2	0-1	0-25	70-98	50-95	35-80	10-50	0-14	NP
	9-27	Very gravelly loamy fine sand, very gravelly sand, cobbly loamy sand	SP-SM, SP, SM	A-2-4, A-1, A-3	0-1	3-30	55-90	35-80	20-55	3-30	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
FeB:												
Fahey, loamy substratum-----	27-45	Very gravelly sand, cobbly sand, extremely gravelly loamy sand	GW, SW	A-1	0-1	5-38	40-85	20-60	15-45	0-10	0-14	NP
	45-72	Very gravelly silt loam, cobbly silt loam, very gravelly fine sandy loam	ML, GC-GM, GM, SM	A-2, A-4	1-7	8-30	60-90	40-75	25-70	15-65	15-25	NP-5
FhB:												
Fahey, very stony----------	0-9	Gravelly fine sandy loam	SM, SP-SM	A-4, A-2, A-1	1-7	0-25	70-98	50-95	35-80	10-50	0-14	NP
	9-27	Very gravelly loamy fine sand, cobbly loamy sand, very gravelly sand	SM, SP, SP-SM	A-2-4, A-3, A-1	0-1	3-30	55-90	35-80	20-55	3-30	0-14	NP
	27-45	Very gravelly sand, cobbly sand, extremely gravelly loamy sand	SW, GW	A-1	0-1	5-38	40-85	20-60	15-45	0-10	0-14	NP
	45-72	Very gravelly silt loam, cobbly silt loam, very gravelly fine sandy loam	GC-GM, GM, ML, SM	A-2, A-4	1-7	8-30	60-90	40-75	25-70	15-65	15-25	NP-5
FkB:												
Fernlake--------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	1-2	Cobbly loamy sand	SM, SP-SM	A-4, A-2-4, A-1-b	0-1	1-20	80-99	55-92	30-70	10-40	0-14	NP
	2-3	Cobbly loamy sand, cobbly loamy fine sand, cobbly fine sand	SM, SP-SM	A-1-b, A-2-4	0-1	1-20	80-99	55-92	30-70	10-30	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
FkB:												
Fernlake--------	3-33	Cobbly loamy sand, cobbly loamy fine sand	SM, SP-SM	A-1, A-2-4	0-4	1-30	80-98	55-95	30-70	10-35	0-14	NP
	33-72	Gravelly loamy sand, gravelly loamy fine sand, cobbly sand	SM, SP-SM	A-2-4, A-3, A-1	0-7	1-30	70-95	50-85	30-70	5-30	0-14	NP
FlB:												
Fernlake, very bouldery-------	0-1	Slightly decomposed plant material	PT	A-8	0-5	0	---	---	---	---	---	---
	1-2	Cobbly loamy sand	SP-SM, SM	A-2-4, A-4, A-1-b	1-7	1-20	80-99	55-92	30-70	10-40	0-14	NP
	2-3	Cobbly loamy sand, cobbly loamy fine sand, cobbly fine sand	SM, SP-SM	A-1-b, A-2-4	0-1	1-20	80-99	55-92	30-70	10-30	0-14	NP
	3-33	Cobbly loamy sand, cobbly loamy fine sand	SM, SP-SM	A-1, A-2-4	0-4	1-30	80-98	55-95	30-70	10-35	0-14	NP
	33-72	Gravelly loamy sand, gravelly loamy fine sand, cobbly sand	SM, SP-SM	A-1, A-2-4, A-3	0-7	1-30	70-95	50-85	30-70	5-30	0-14	NP
FlC:												
Fernlake, very bouldery-------	0-1	Slightly decomposed plant material	PT	A-8	0-5	0	---	---	---	---	---	---
	1-2	Cobbly loamy sand	SM, SP-SM	A-4, A-2-4, A-1-b	1-7	1-20	80-99	55-92	30-70	10-40	0-14	NP
	2-3	Cobbly loamy sand, cobbly loamy fine sand, cobbly fine sand	SM, SP-SM	A-2-4, A-1-b	0-1	1-20	80-99	55-92	30-70	10-30	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
FlC:												
Fernlake, very bouldery-------	3-33	Cobbly loamy sand, cobbly loamy fine sand	SM, SP-SM	A-1, A-2-4	0-4	1-30	80-98	55-95	30-70	10-35	0-14	NP
	33-72	Gravelly loamy sand, gravelly loamy fine sand, cobbly sand	SM, SP-SM	A-1, A-2-4, A-3	0-7	1-30	70-95	50-85	30-70	5-30	0-14	NP
FlD:												
Fernlake, very bouldery-------	0-1	Slightly decomposed plant material	PT	A-8	0-5	0	---	---	---	---	---	---
	1-2	Cobbly loamy sand	SM, SP-SM	A-2-4, A-4, A-1-b	1-7	1-20	80-99	55-92	30-70	10-40	0-14	NP
	2-3	Cobbly loamy sand, cobbly loamy fine sand, cobbly fine sand	SM, SP-SM	A-2-4, A-1-b	0-1	1-20	80-99	55-92	30-70	10-30	0-14	NP
	3-33	Cobbly loamy sand, cobbly loamy fine sand	SM, SP-SM	A-1, A-2-4	0-4	1-30	80-98	55-95	30-70	10-35	0-14	NP
	33-72	Gravelly loamy sand, gravelly loamy fine sand, cobbly sand	SM, SP-SM	A-2-4, A-3, A-1	0-7	1-30	70-95	50-85	30-70	5-30	0-14	NP
FlF:												
Fernlake, very bouldery-------	0-1	Slightly decomposed plant material	PT	A-8	0-5	0	---	---	---	---	---	---
	1-2	Cobbly loamy sand	SM, SP-SM	A-2-4, A-4, A-1-b	1-7	1-20	80-99	55-92	30-70	10-40	0-14	NP
	2-3	Cobbly loamy sand, cobbly loamy fine sand, cobbly fine sand	SP-SM, SM	A-1-b, A-2-4	0-1	1-20	80-99	55-92	30-70	10-30	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
FlF:												
Fernlake, very bouldery-------	3-33	Cobbly loamy sand, cobbly sand, cobbly loamy fine sand	SP-SM, SM	A-1, A-2-4	0-4	1-30	80-98	55-95	30-70	10-35	0-14	NP
	33-72	Gravelly loamy sand, gravelly loamy fine sand, cobbly sand	SP-SM, SM	A-1, A-2-4, A-3	0-7	1-30	70-95	50-85	30-70	5-30	0-14	NP
FmB:												
Flackville------	0-12	Loamy fine sand	SW-SM, SM	A-2, A-2-4, A-3, A-4	0	0	100	90-100	45-85	5-50	0-20	NP-3
	12-26	Fine sand, sand, loamy fine sand	SM, SW-SM	A-1, A-2, A-3	0	0	100	85-100	45-80	5-35	0-14	NP
	26-72	Silty clay, clay, silty clay loam	CL-ML, CL	A-7-6, A-7, A-6, A-4	0	0	100	90-100	90-100	75-95	20-50	5-30
Fn:												
Fluvaquents, frequently flooded--------	0-12	Mucky silt loam	CL, ML, SM	A-4, A-6, A-2	0	0-5	80-100	75-100	40-100	15-95	0-30	NP-20
	12-72	Very gravelly sandy loam, gravelly silt loam, silty clay loam	CL, SC-SM, ML, GM	A-6, A-2	0	0-15	55-100	40-100	15-100	5-90	0-30	NP-20
Fluvaquents, frequently flooded--------	0-12	Silt loam	SM, CL, ML	A-2, A-4, A-6	0	0-5	86-100	86-100	40-100	15-95	0-30	NP-20
	12-72	Very gravelly sandy loam, gravelly silt loam, silty clay loam	CL, GM, SC-SM, ML	A-2, A-6	0	0-15	55-100	40-100	15-100	5-90	0-30	NP-20

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Udifluvents, frequently flooded--------	0-12	Gravelly loamy sand	GM, CL, SM, ML	A-1, A-2, A-4	0	0-10	60-80	55-75	30-75	10-65	0-25	NP-20
	12-72	Very gravelly sand, gravelly loam, silty clay loam, silt loam	CL, GM, ML	A-1, A-2, A-4, A-6	0	0-15	50-100	35-100	15-100	5-90	0-30	NP-20
GfC:												
Gardenisle------	0-5	Loam	SM, SC-SM, ML	A-4	0	0	90-100	80-95	60-90	30-70	0-15	NP-5
	5-9	Loam, fine sandy loam, gravelly loam	ML, CL-ML, SC-SM	A-4	0-1	0-10	85-100	75-95	50-85	30-70	20-35	4-10
	9-17	Gravelly loam, gravelly silt loam	CL, CL-ML	A-4	0-5	1-10	55-90	50-90	50-85	35-80	25-35	5-12
	17-24	Very channery loam, very channery silt loam, channery loam	SM, GM, ML	A-2, A-4	0-10	1-25	50-85	30-80	25-75	20-70	0-15	1-5
	24-34	Bedrock			---	---	---	---	---	---	0-14	---
	34-42	Unweathered bedrock			---	---	---	---	---	---	---	---
Benson----------	0-6	Loam	ML, CL, CL-ML	A-4, A-6	0-1	0-7	90-100	85-95	70-95	50-90	20-40	NP-18
	6-14	Channery silty clay loam, very channery silty clay loam, very channery loam, channery loam	ML, CL, SM, GM	A-1, A-2, A-4, A-6	0-5	0-30	40-85	35-80	30-80	20-75	20-40	NP-18
	14-18	Extremely channery silty clay loam	CL, GM, ML	A-2, A-6, A-4	0-5	1-30	40-85	35-80	30-80	30-80	20-40	NP-18
	18-26	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Gl:												
Gougeville, undrained------	0-6	Mucky loamy fine sand	SM	A-2, A-4	0	0	100	95-100	50-85	15-45	0-14	NP
	6-40	Fine sand, loamy fine sand	SM	A-2-4	0	0	100	95-100	50-80	15-35	0-14	NP
	40-72	Fine sand, loamy fine sand, very fine sandy loam	SM	A-2-4, A-4	0	0	100	95-100	55-95	15-60	0-20	NP-4
GrA:												
Grattan---------	0-3	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-5	Loamy sand	SP-SM, SM	A-2-4, A-1-b	0	0	95-100	90-100	45-75	10-30	0-14	NP
	5-41	Sand, loamy sand	SP, SP-SM, SM	A-3, A-2-4, A-1-b	0	0	95-100	90-100	45-75	3-30	0-14	NP
	41-72	Sand, coarse sand	SP, SP-SM, SM	A-1-b, A-2-4, A-3	0	0	95-100	90-100	45-70	0-15	0-14	NP
GrB:												
Grattan---------	0-3	Moderately decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-5	Loamy sand	SM, SP-SM	A-1-b, A-2-4	0	0	95-100	90-100	45-75	10-30	0-14	NP
	5-41	Sand, loamy sand	SP-SM, SM, SP	A-1-b, A-2-4, A-3	0	0	95-100	90-100	45-75	3-30	0-14	NP
	41-72	Sand, coarse sand	SM, SP, SP-SM	A-1-b, A-3, A-2-4	0	0	95-100	90-100	45-70	0-15	0-14	NP
GvB:												
Grenville-------	0-9	Loam	ML, SM	A-2, A-4	0	0-15	90-100	80-98	50-90	30-80	35-40	1-5
	9-17	Loam, gravelly fine sandy loam, fine sandy loam	SM, ML, CL-ML	A-2, A-4	0-1	0-15	85-95	70-90	35-80	25-65	15-20	1-5
	17-35	Gravelly fine sandy loam, fine sandy loam, loam	SM, GM, ML, CL-ML	A-4, A-2	0-4	0-18	70-95	65-90	35-80	25-65	15-20	1-5

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
GvB:												
Grenville-------	35-72	Gravelly fine sandy loam, gravelly loam, very gravelly fine sandy loam	GM, SM, ML, GC-GM	A-4, A-2, A-1	0-5	1-20	55-90	50-85	30-70	20-55	15-20	1-5
GwC:												
Grenville, very stony----------	0-9	Loam	ML, SM	A-2, A-4	1-7	0-15	90-100	80-98	50-90	30-80	35-40	1-5
	9-17	Loam, gravelly fine sandy loam, fine sandy loam	ML, SM, CL-ML	A-2, A-4	0-4	0-15	85-95	70-90	35-80	25-65	15-20	1-5
	17-35	Gravelly fine sandy loam, fine sandy loam, loam	SM, CL-ML, GM, ML	A-2, A-4	0-4	0-18	70-95	65-90	35-80	25-65	15-20	1-5
	35-72	Gravelly fine sandy loam, gravelly loam, very gravelly fine sandy loam	GM, SM, GC-GM, ML	A-1, A-4, A-2	0-5	1-20	55-90	50-85	30-70	20-55	15-20	1-5
Ha:												
Hailesboro------	0-9	Silt loam	ML, CL-ML, CL	A-4, A-6	0	0	100	92-100	85-100	60-90	20-40	3-15
	9-30	Silt loam, silty clay loam, very fine sandy loam	CL, CL-ML, ML	A-4, A-6	0	0	95-100	92-100	85-100	60-95	25-35	3-13
	30-72	Silt loam, silty clay loam, very fine sandy loam	ML, CL-ML, CL	A-4, A-6	0	0	95-100	92-100	90-100	70-95	25-35	3-13
HeB:												
Hermon----------	0-6	Fine sandy loam	GM, SM	A-1, A-2, A-4	0-1	0-30	70-98	60-95	30-80	15-45	0-40	NP-10
	6-10	Fine sandy loam, sandy loam, very gravelly coarse sandy loam	SM, GM	A-4, A-2, A-1	0-15	1-30	60-95	50-90	30-80	15-45	0-40	NP-10

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
HeB:												
Hermon----------	10-37	Very cobbly loamy sand, very gravelly loamy sand, gravelly fine sandy loam, extremely gravelly sandy loam	GM, SM, GP-GM, SP-SM	A-4, A-1, A-2	5-20	10-35	40-80	30-75	15-65	10-40	0-40	NP-10
	37-72	Very cobbly loamy sand, cobbly loamy sand, gravelly loamy sand, very cobbly coarse sand, extremely gravelly sand	GM, SM, SP-SM, GP-GM	A-1, A-2, A-3	5-20	10-35	40-80	35-75	10-55	5-25	0-14	NP
HeC:												
Hermon----------	0-6	Fine sandy loam	SM, GM	A-1, A-2, A-4	0-1	0-30	70-98	60-95	30-80	15-45	0-40	NP-10
	6-10	Fine sandy loam, sandy loam, very gravelly coarse sandy loam	SM, GM	A-1, A-2, A-4	0-15	1-30	60-95	50-90	30-80	15-45	0-40	NP-10
	10-37	Very cobbly loamy sand, very gravelly loamy sand, gravelly fine sandy loam, extremely gravelly sandy loam	GM, GP-GM, SM, SP-SM	A-1, A-2, A-4	5-20	10-35	40-80	30-75	15-65	10-40	0-40	NP-10
	37-72	Very cobbly loamy sand, cobbly loamy sand, gravelly loamy sand, very cobbly coarse sand, extremely gravelly sand	GM, SM, SP-SM, GP-GM	A-1, A-2, A-3	5-20	10-35	40-80	35-75	10-55	5-25	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
HfC:												
Hermon, very bouldery-------	0-6	Fine sandy loam	GM, SM	A-1, A-2, A-4	1-7	0-30	70-98	60-95	30-80	15-45	0-40	NP-10
	6-10	Fine sandy loam, sandy loam, very gravelly coarse sandy loam	GM, SM	A-1, A-2, A-4	0-15	1-30	60-95	50-90	30-80	15-45	0-40	NP-10
	10-37	Very cobbly loamy sand, very gravelly loamy sand, gravelly fine sandy loam, extremely gravelly sandy loam	GM, GP-GM, SM, SP-SM	A-1, A-2, A-4	5-20	10-35	40-80	30-75	15-65	10-40	0-40	NP-10
	37-72	Very cobbly loamy sand, cobbly loamy sand, gravelly loamy sand, very cobbly coarse sand, extremely gravelly sand	GP-GM, SM, GM, SP-SM	A-3, A-1, A-2	5-20	10-35	40-80	35-75	10-55	5-25	0-14	NP
HfD:												
Hermon, very bouldery-------	0-6	Fine sandy loam	SM, GM	A-1, A-2, A-4	1-7	0-30	70-98	60-95	30-80	15-45	0-40	NP-10
	6-10	Fine sandy loam, sandy loam, very gravelly coarse sandy loam	SM, GM	A-1, A-2, A-4	0-15	1-30	60-95	50-90	30-80	15-45	0-40	NP-10
	10-37	Very cobbly loamy sand, very gravelly loamy sand, gravelly fine sandy loam, extremely gravelly sandy loam	GM, GP-GM, SM, SP-SM	A-4, A-1, A-2	5-20	10-35	40-80	30-75	15-65	10-40	0-40	NP-10

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
HfD:												
Hermon, very bouldery-------	37-72	Very cobbly loamy sand, cobbly loamy sand, gravelly loamy sand, very cobbly coarse sand, extremely gravelly sand	SM, SP-SM, GP-GM, GM	A-2, A-3, A-1	5-20	10-35	40-80	35-75	10-55	5-25	0-14	NP
HgC:												
Hermon, very bouldery-------	0-6	Fine sandy loam	SM, GM	A-1, A-2, A-4	1-7	0-30	70-98	60-95	30-80	15-45	0-40	NP-10
	6-10	Fine sandy loam, sandy loam, very gravelly coarse sandy loam	SM, GM	A-1, A-2, A-4	0-15	1-30	60-95	50-90	30-80	15-45	0-40	NP-10
	10-37	Very cobbly loamy sand, very gravelly loamy sand, gravelly fine sandy loam, extremely gravelly sandy loam	GM, GP-GM, SM, SP-SM	A-2, A-4, A-1	5-20	10-35	40-80	30-75	15-65	10-40	0-40	NP-10
	37-72	Very cobbly loamy sand, cobbly loamy sand, gravelly loamy sand, very cobbly coarse sand, extremely gravelly sand	GM, SM, SP-SM, GP-GM	A-1, A-2, A-3	5-20	10-35	40-80	35-75	10-55	5-25	0-14	NP
Adirondack, very bouldery-------	0-5	Loam	ML, SM	A-4	1-7	0-10	85-100	80-95	45-90	40-80	0-25	NP-3
	5-22	Loam, fine sandy loam, gravelly fine sandy loam, sandy loam	ML, SM	A-4	0-5	0-10	75-100	65-95	40-80	30-70	0-25	NP-3

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Adirondack, very bouldery-------	22-72	Gravelly fine sandy loam, gravelly sandy loam, gravelly loamy fine sand	GM, SM	A-4, A-2-4	0-7	0-15	65-90	50-85	30-45	25-40	0-25	NP-3
HlB:												
Heuvelton-------	0-6	Silty clay loam	CL-ML, CL	A-6, A-4	0	0-1	90-100	80-100	80-100	70-95	25-40	5-20
	6-10	Silty clay loam, silty clay	CL, CH	A-7, A-6	0	0	95-100	85-100	80-100	75-95	30-55	10-30
	10-39	Silty clay, clay, silty clay loam	CL	A-6, A-7	0	0	95-100	85-100	80-100	75-95	30-55	10-30
	39-72	Clay, silty clay, silty clay loam	CL	A-6, A-7	0	0	95-100	85-100	80-100	75-100	25-50	10-30
HlD:												
Heuvelton-------	0-6	Silty clay loam	CL, CL-ML	A-4, A-6	0	0-1	90-100	80-100	80-100	70-95	25-40	5-20
	6-10	Silty clay loam, silty clay	CH, CL	A-7, A-6	0	0	95-100	85-100	80-100	75-95	30-55	10-30
	10-39	Silty clay, clay, silty clay loam	CL	A-6, A-7	0	0	95-100	85-100	80-100	75-95	30-55	10-30
	39-72	Clay, silty clay, silty clay loam	CL	A-6, A-7	0	0	95-100	85-100	80-100	75-100	25-50	10-30
HoA:												
Hogansburg------	0-10	Loam	ML, SM	A-2, A-4	0-1	0-10	85-98	70-95	50-95	30-85	35-40	1-5
	10-19	Loam, fine sandy loam, gravelly loam	SM, ML, GM, CL-ML	A-4, A-1, A-2	0-2	0-10	70-95	65-90	30-90	15-80	15-20	1-5
	19-35	Gravelly loam, fine sandy loam, loam	GM, ML, CL-ML, SM	A-1, A-2, A-4	0-7	1-15	60-92	55-90	30-90	15-80	15-20	1-5
	35-72	Gravelly loam, gravelly fine sandy loam, very gravelly fine sandy loam	SM, CL-ML, GM, ML	A-2, A-1, A-4	0-7	1-15	65-92	60-85	30-70	20-55	15-20	1-5

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
HoB:												
Hogansburg------	0-10	Loam	ML, SM	A-2, A-4	0-1	0-10	85-98	70-95	50-95	30-85	35-40	1-5
	10-19	Loam, fine sandy loam, gravelly loam	CL-ML, ML, SM, GM	A-2, A-4, A-1	0-2	0-10	70-95	65-90	30-90	15-80	15-20	1-5
	19-35	Gravelly loam, fine sandy loam, loam	CL-ML, SM, ML, GM	A-1, A-2, A-4	0-7	1-15	60-92	55-90	30-90	15-80	15-20	1-5
	35-72	Gravelly loam, gravelly fine sandy loam, very gravelly fine sandy loam	CL-ML, GM, ML, SM	A-2, A-4, A-1	0-7	1-15	65-92	60-85	30-70	20-55	15-20	1-5
HrB:												
Hogansburg, very stony----------	0-10	Loam	SM, ML	A-2, A-4	1-7	0-10	85-98	70-95	50-95	30-85	35-40	1-5
	10-19	Loam, fine sandy loam, gravelly loam	SM, ML, GM, CL-ML	A-1, A-2, A-4	0-7	0-10	70-95	65-90	30-90	15-80	15-20	1-5
	19-35	Gravelly loam, fine sandy loam, loam	SM, ML, CL-ML, GM	A-2, A-4, A-1	0-7	1-15	60-92	55-90	30-90	15-80	15-20	1-5
	35-72	Gravelly loam, gravelly fine sandy loam, very gravelly fine sandy loam	CL-ML, GM, ML, SM	A-2, A-4, A-1	0-7	1-15	65-92	60-85	30-70	20-55	15-20	1-5
InB:												
Irona-----------	0-5	Fine sandy loam	ML, SM	A-4	0-1	0-10	80-98	65-95	55-85	30-70	25-35	NP-10
	5-13	Fine sandy loam, loam, gravelly sandy loam	CL-ML, SM, SC-SM, ML	A-2, A-1-b, A-4	0-1	0-15	65-95	50-90	35-80	20-65	10-30	NP-10
	13-18	Sandy loam, fine sandy loam, gravelly fine sandy loam	SM, SC-SM, GC-GM	A-1-b, A-2, A-4	0-2	1-15	65-95	50-90	35-75	20-50	0-20	NP-5
	18-26	Unweathered bedrock			---	---	---	---	---	---	0-14	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
InB:												
Conic-----------	0-1	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	1-4	Fine sandy loam			1-7	1-7	80-95	70-92	45-80	25-65	---	---
	4-23	Fine sandy loam, gravelly fine sandy loam, loam	ML, CL-ML	A-4	1-7	1-7	80-95	70-92	45-80	25-65	15-25	2-7
	23-37	Gravelly fine sandy loam	GM, SM	A-1-b, A-2, A-4	0-7	1-20	65-92	50-75	30-65	20-40	0-20	NP-4
	37-45	Unweathered bedrock			---	---	---	---	---	---	---	---
Jn:												
Junius----------	0-9	Fine sand	SM	A-2, A-4	0	0	100	95-100	65-85	20-50	0-14	NP
	9-46	Fine sand, loamy fine sand	SM	A-2, A-4	0	0	100	95-100	60-85	20-45	0-14	NP
	46-72	Fine sand, very fine sand, loamy very fine sand, sand	SP-SM, SW-SM, SM	A-4, A-2	0	0	95-100	92-100	60-100	10-60	0-14	NP
KhB:												
Kalurah---------	0-8	Fine sandy loam	SM, ML	A-4, A-2	0-1	1-8	85-95	80-90	50-90	30-80	35-40	1-5
	8-45	Fine sandy loam, gravelly fine sandy loam, loam	CL-ML, GM, SC-SM, SM	A-1, A-2, A-4	0-1	0-15	75-95	60-90	35-85	15-65	15-20	1-5
	45-72	Gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	CL-ML, GM, ML, SC-SM	A-4, A-1, A-2	0-3	0-20	65-95	50-90	30-80	15-60	15-20	1-5
KlB:												
Kalurah, very stony----------	0-8	Fine sandy loam	ML, SM	A-2, A-4	1-7	1-8	85-95	80-90	50-90	30-80	35-40	1-5
	8-45	Fine sandy loam, gravelly fine sandy loam, loam	SM, CL-ML, GM, SC-SM	A-4, A-1, A-2	0-1	0-15	75-95	60-90	35-85	15-65	15-20	1-5

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
KlB:												
Kalurah, very stony----------	45-72	Gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	CL-ML, GM, ML, SC-SM	A-1, A-2, A-4	0-3	0-20	65-95	50-90	30-80	15-60	15-20	1-5
Kr:												
Kingsbury-------	0-8	Silty clay loam	MH, ML	A-7	0	0	100	95-100	90-100	80-95	40-55	11-20
	8-11	Silty clay			0	0	100	98-100	90-100	80-95	---	---
	11-32	Clay	CH, MH	A-7	0	0	100	98-100	90-100	90-100	50-65	21-35
	32-72	Clay, silty clay, silty clay loam	CH, MH	A-7	0	0	100	95-100	90-100	90-100	50-65	21-35
Rhinebeck-------	0-8	Silty clay loam	CH, ML, CL, MH	A-7, A-6	0	0	92-100	85-100	80-100	70-95	30-55	10-25
	8-31	Silty clay, silty clay loam	CH, CL	A-6, A-7	0	0	92-100	85-100	85-100	85-95	30-55	15-30
	31-51	Silty clay loam, clay	CH, CL	A-6, A-7	0	0	92-100	85-100	85-100	85-95	30-55	15-30
	51-72	Silty clay loam, silt loam, very fine sandy loam	CL, CL-ML, ML	A-4	0	0	92-100	85-100	85-100	55-95	10-30	NP-10
Ld:												
Lovewell, stratified substratum-----	0-11	Very fine sandy loam	ML, CL-ML, CL	A-4, A-6	0	0	95-100	95-100	90-100	50-80	0-40	NP-15
	11-30	Very fine sandy loam, silt loam	CL-ML, CL, ML	A-4, A-6	0	0	95-100	95-100	90-100	50-70	0-40	NP-15
	30-50	Very fine sandy loam, silt loam, loamy very fine sand	ML, CL-ML, CL	A-6, A-4	0	0	95-100	95-100	90-100	45-65	0-40	NP-15
	50-75	Stratified fine sand	SM, ML, SP-SM	A-4, A-2, A-3	0	0	85-100	80-100	50-95	5-55	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Le:												
Loxley	0-16	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	16-72	Muck	PT	A-8	0	0	---	---	---	---	---	---
LtF:												
Lyman, very bouldery	0-3	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-6	Fine sandy loam	ML, SM	A-2, A-4	1-7	0-15	85-98	75-95	55-80	30-55	0-30	NP-6
	6-17	Fine sandy loam, gravelly fine sandy loam, loam, silt loam	GM, ML, SM	A-1, A-2, A-4	0-4	0-15	80-95	60-90	45-75	20-60	0-30	NP-4
	17-25	Unweathered bedrock			---	---	---	---	---	---	---	---
Tunbridge, very bouldery	0-4	Fine sandy loam	ML, SM	A-2, A-4	1-7	0-10	85-98	75-95	30-90	15-60	0-20	NP-2
	4-26	Gravelly loam, loam, gravelly fine sandy loam, sandy loam, silt loam	ML, SM	A-2, A-5	0-3	0-15	75-95	65-95	25-95	20-85	0-50	NP-6
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Lv:												
Lyonmounten, undrained	0-9	Loam	SM, ML	A-4	0-1	0-4	80-100	65-100	45-90	35-70	10-30	NP-10
	9-41	Loam, gravelly loam, gravelly fine sandy loam	GM, ML, SM	A-2, A-4	0-4	1-10	70-95	50-85	40-80	25-55	15-30	1-10
	41-72	Gravelly loam, gravelly fine sandy loam, sandy loam	SC-SM, CL-ML, SM, ML	A-1-b, A-2, A-4	0-4	1-10	70-95	50-85	35-75	20-55	15-25	1-10

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Ly: Lyonmounten, very stony-----	0-9	Loam	SM, ML	A-4	1-7	0-4	80-100	65-100	45-90	35-70	10-30	NP-10
	9-41	Loam, gravelly loam, gravelly fine sandy loam	ML, SM, GM	A-2, A-4	0-4	1-10	70-95	50-85	40-80	25-55	15-30	1-10
	41-72	Gravelly loam, gravelly fine sandy loam, sandy loam	SM, SC-SM, CL-ML, ML	A-1-b, A-2, A-4	0-4	1-10	70-95	50-85	35-75	20-55	15-25	1-10
MaB: Madrid----------	0-6	Fine sandy loam	SM, ML	A-4, A-2	0	0-15	85-100	75-100	50-90	30-90	30-40	5-10
	6-28	Fine sandy loam, gravelly loam, gravelly silt loam	CL-ML, GC-GM, SC-SM, SC	A-4, A-2	0	0-15	80-95	60-90	40-90	25-80	20-30	5-10
	28-42	Gravelly loam, fine sandy loam, gravelly silt loam	GC-GM, SC, SC-SM, CL-ML	A-2, A-4	0	0-15	70-95	55-90	40-90	25-80	20-30	5-10
	42-72	Gravelly fine sandy loam, silt loam, very gravelly loam	SC-SM, SC, GC-GM, CL-ML	A-1, A-2, A-4	0	0-15	65-90	50-90	35-90	20-80	20-30	5-10
MaC: Madrid----------	0-6	Fine sandy loam	ML, SM	A-2, A-4	0	0-15	85-100	75-100	50-90	30-90	30-40	5-10
	6-28	Fine sandy loam, gravelly loam, gravelly silt loam	GC-GM, CL-ML, SC, SC-SM	A-2, A-4	0	0-15	80-95	60-90	40-90	25-80	20-30	5-10
	28-42	Gravelly loam, fine sandy loam, gravelly silt loam	SC-SM, SC, GC-GM, CL-ML	A-4, A-2	0	0-15	70-95	55-90	40-90	25-80	20-30	5-10
	42-72	Gravelly fine sandy loam, silt loam, very gravelly loam	CL-ML, SC-SM, SC, GC-GM	A-1, A-2, A-4	0	0-15	65-90	50-90	35-90	20-80	20-30	5-10

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
MeA:												
Malone----------	0-9	Gravelly loam	GC, CL, SC	A-7, A-6, A-2	0-1	0-15	75-95	60-90	40-65	30-60	35-45	12-20
	9-30	Gravelly fine sandy loam, gravelly sandy loam, loam	GC, SC, SC-SM, CL-ML	A-1, A-2, A-4, A-6	0-1	0-15	65-95	50-90	35-85	15-65	15-25	5-15
	30-72	Very gravelly sandy loam, gravelly fine sandy loam, gravelly loam	GC-GM, SC, CL-ML, GC	A-1, A-2, A-4, A-6	1-5	0-15	65-95	35-90	20-85	10-65	15-25	5-15
MeB:												
Malone----------	0-9	Gravelly loam	CL, SC, GC	A-2, A-6, A-7	0-1	0-15	75-95	60-90	40-65	30-60	35-45	12-20
	9-30	Gravelly fine sandy loam, gravelly sandy loam, loam	SC, SC-SM, GC, CL-ML	A-1, A-4, A-6, A-2	0-1	0-15	65-95	50-90	35-85	15-65	15-25	5-15
	30-72	Very gravelly sandy loam, gravelly fine sandy loam, gravelly loam	SC, GC-GM, GC, CL-ML	A-4, A-6, A-2, A-1	1-5	0-15	65-95	35-90	20-85	10-65	15-25	5-15
MfB:												
Malone, very stony----------	0-9	Gravelly loam	CL, GC, SC	A-6, A-7, A-2	1-7	0-15	75-95	60-90	40-65	30-60	35-45	12-20
	9-30	Gravelly fine sandy loam, gravelly sandy loam, loam	SC, GC, SC-SM, CL-ML	A-1, A-2, A-4, A-6	0-4	0-15	65-95	50-90	35-85	15-65	15-25	5-15
	30-72	Very gravelly sandy loam, gravelly fine sandy loam, gravelly loam	CL-ML, GC, GC-GM, SC	A-2, A-6, A-4, A-1	1-5	0-15	65-95	35-90	20-85	10-65	15-25	5-15
Mk:												
Markey----------	0-27	Muck	PT	A-8	0	0	---	---	---	---	---	---
	27-72	Sand, fine sand, gravelly loamy sand	SM, SP	A-1, A-2, A-3	0	0	80-100	60-100	30-80	0-35	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Mn:												
Massena---------	0-9	Fine sandy loam	SC, GC	A-2, A-6, A-7	0-1	0-15	75-95	65-90	30-75	15-60	35-45	12-20
	9-32	Gravelly fine sandy loam, gravelly loam, gravelly sandy loam, loam	SC-SM, CL, CL-ML, GC	A-1, A-2, A-4, A-6	0-4	0-15	70-95	60-90	35-85	15-65	15-25	5-15
	32-72	Gravelly loam, fine sandy loam, very gravelly sandy loam	CL, CL-ML, GC, SC	A-1, A-2, A-4, A-6	1-10	0-15	70-95	60-90	20-85	10-65	15-25	5-15
Mp:												
Medomak, stratified substratum-----	0-1	Peat	PT	A-8	0	0	---	---	---	---	---	---
	1-13	Silt loam	ML, CL, CL-ML	A-4, A-6	0	0	95-100	90-100	85-100	80-95	0-40	NP-15
	13-26	Very fine sandy loam, silt loam, loamy very fine sand	ML	A-4	0	0	95-100	90-100	85-100	60-95	0-40	NP-10
	26-47	Very fine sandy loam, silt loam, loamy very fine sand	ML, CL-ML	A-4	0	0	95-100	90-100	85-100	60-95	0-25	NP-5
	47-72	Stratified gravelly fine sandy loam	GM, SP-SM, SM	A-1, A-2, A-3, A-4	0	0-25	65-100	45-100	20-95	2-40	0-14	NP
Ms:												
Mino------------	0-9	Loam	ML, SM	A-4	0	0	95-100	92-100	70-100	35-90	0-20	NP-4
	9-24	Very fine sandy loam, loamy very fine sand, loam, fine sandy loam	SM, ML	A-4	0	0	95-100	92-100	70-95	35-90	0-20	NP-4
	24-78	Very fine sandy loam, loam, fine sandy loam	ML, SM	A-4	0	0	95-100	92-100	70-95	35-90	0-20	NP-4

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
MtB:												
Monadnock-------	0-2	Fine sandy loam	ML, SM	A-2, A-4	0-1	0-5	90-100	85-100	55-85	30-60	0-18	NP
	2-36	Very fine sandy loam, fine sandy loam, gravelly fine sandy loam	SM, ML	A-2, A-4	0-1	0-15	80-100	70-100	50-85	30-60	0-12	NP
	36-72	Loamy fine sand, gravelly loamy sand, very gravelly loamy sand	SW-SM, SP-SM, SM	A-1, A-2	0-7	0-25	80-100	50-100	20-60	10-30	0-14	NP
MtC:												
Monadnock-------	0-2	Fine sandy loam	ML, SM	A-4, A-2	0-1	0-5	90-100	85-100	55-85	30-60	0-18	NP
	2-36	Very fine sandy loam, fine sandy loam, gravelly fine sandy loam	SM, ML	A-2, A-4	0-1	0-15	80-100	70-100	50-85	30-60	0-12	NP
	36-72	Loamy fine sand, gravelly loamy sand, very gravelly loamy sand	SM, SP-SM, SW-SM	A-2, A-1	0-7	0-25	80-100	50-100	20-60	10-30	0-14	NP
MuC:												
Monadnock, very bouldery-------	0-2	Fine sandy loam	ML, SM	A-2, A-4	1-7	0-5	90-100	85-100	55-85	30-60	0-18	NP
	2-36	Very fine sandy loam, fine sandy loam, gravelly fine sandy loam	ML, SM	A-2, A-4	0-7	0-15	80-100	70-100	50-85	30-60	0-12	NP
	36-72	Loamy fine sand, gravelly loamy sand, very gravelly loamy sand	SP-SM, SW-SM, SM	A-1, A-2	0-7	0-25	80-100	50-100	20-60	10-30	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
MuD:												
Monadnock, very bouldery-------	0-2	Fine sandy loam	ML, SM	A-2, A-4	1-7	0-5	90-100	85-100	55-85	30-60	0-18	NP
	2-36	Very fine sandy loam, fine sandy loam, gravelly fine sandy loam	SM, ML	A-2, A-4	0-7	0-15	80-100	70-100	50-85	30-60	0-12	NP
	36-72	Loamy fine sand, gravelly loamy sand, very gravelly loamy sand	SW-SM, SP-SM, SM	A-1, A-2	0-7	0-25	80-100	50-100	20-60	10-30	0-14	NP
MuF:												
Monadnock, very bouldery-------	0-2	Fine sandy loam	ML, SM	A-2, A-4	1-7	0-5	90-100	85-100	55-85	30-60	0-18	NP
	2-36	Very fine sandy loam, fine sandy loam, gravelly fine sandy loam	ML, SM	A-4, A-2	0-7	0-15	80-100	70-100	50-85	30-60	0-12	NP
	36-72	Loamy fine sand, gravelly loamy sand, very gravelly loamy sand	SP-SM, SW-SM, SM	A-2, A-1	0-7	0-25	80-100	50-100	20-60	10-30	0-14	NP
MvA:												
Mooers----------	0-8	Loamy sand	SC-SM, SM	A-2	0	0	100	100	55-80	5-35	20-25	NP-4
	8-47	Sand, fine sand, loamy sand	SM, SP-SM	A-2	0	0	100	95-100	55-80	5-35	0-10	NP-2
	47-72	Loamy very fine sand, fine sand, loamy fine sand	SC-SM, SM	A-2, A-4	0	0	100	95-100	60-95	20-70	10-15	NP-4
MvB:												
Mooers----------	0-8	Loamy sand	SC-SM, SM	A-2	0	0	100	100	55-80	5-35	20-25	NP-4
	8-47	Sand, fine sand, loamy sand	SM, SP-SM	A-2	0	0	100	95-100	55-80	5-35	0-10	NP-2
	47-72	Loamy very fine sand, fine sand, loamy fine sand	SM, SC-SM	A-4, A-2	0	0	100	95-100	60-95	20-70	10-15	NP-4

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
MwA:												
Muskellunge-----	0-9	Silty clay loam	MH, ML, CL, CH	A-6, A-7	0	0	92-100	90-100	90-100	70-95	30-55	10-25
	9-38	Silty clay, silty clay loam	CH, CL	A-6, A-7	0	0	95-100	92-100	90-100	70-95	30-55	15-30
	38-72	Silty clay, clay	CH, CL	A-6, A-7	0	0	92-100	85-100	75-100	50-95	30-55	15-30
MwB:												
Muskellunge-----	0-9	Silty clay loam	ML, MH, CL, CH	A-6, A-7	0	0	92-100	90-100	90-100	70-95	30-55	10-25
	9-38	Silty clay, silty clay loam	CL, CH	A-7, A-6	0	0	95-100	92-100	90-100	70-95	30-55	15-30
	38-72	Silty clay, clay	CL, CH	A-7, A-6	0	0	92-100	85-100	75-100	50-95	30-55	15-30
NeC:												
Neckrock--------	0-9	Loam	ML, SM	A-4	0-1	0-15	85-100	80-95	60-95	40-85	10-30	NP-10
	9-17	Loam, fine sandy loam, gravelly loam	ML, CL-ML, GM, SM	A-2, A-4	0-1	0-15	80-100	70-90	50-85	30-70	15-30	NP-10
	17-27	Cobbly loam, gravelly silt loam, silty clay loam	CL-ML, CL	A-4	0-5	1-9	85-100	70-90	50-85	40-80	25-35	5-15
	27-32	Very gravelly loam, gravelly fine sandy loam, silt loam	GM, SM, ML	A-4, A-1-b, A-2	0-5	1-14	60-90	50-85	30-80	20-70	10-30	1-10
	32-40	Unweathered bedrock			---	---	---	---	---	---	0-14	---
Summerville-----	0-5	Loam	CL-ML, CL	A-4, A-6	0	0-15	80-100	70-100	65-95	55-75	25-35	7-15
	5-12	Loam, fine sandy loam, sandy loam	CL, SC-SM, SC, CL-ML	A-2-4, A-2-6, A-4	0-1	0-15	80-100	70-100	55-95	25-75	20-35	4-15
	12-20	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
NoB:												
Nicholville-----	0-9	Very fine sandy loam	CL-ML, ML	A-4, A-6	0	0	90-100	85-100	70-100	60-90	20-40	2-12
	9-20	Very fine sandy loam, silt loam, loamy very fine sand	CL-ML, ML	A-4	0	0	90-100	85-100	75-100	60-90	15-25	NP-5
	20-34	Loamy very fine sand, loamy fine sand, silt loam, very fine sand	SC-SM, SM, ML, CL-ML	A-2, A-4	0	0	90-100	85-100	65-100	30-90	15-25	NP-5
	34-72	Loamy very fine sand, silt loam, loamy fine sand	CL-ML, SC-SM, ML, SM	A-2, A-4	0	0	90-100	85-100	50-100	25-90	15-25	NP-5
NrA:												
Northway--------	0-8	Loamy fine sand	SM	A-2, A-4	0	0-1	90-100	85-100	50-70	15-40	5-20	NP-4
	8-32	Fine sand, loamy fine sand, sand	SM, SP-SM	A-2	0	0-1	90-100	85-100	50-70	10-35	5-15	NP
	32-72	Gravelly loam, gravelly fine sandy loam, loam	SC-SM, CL-ML, ML, SM	A-4, A-2	0-3	4-15	75-95	60-90	50-80	20-65	10-25	1-10
NrB:												
Northway--------	0-8	Loamy fine sand	SM	A-2, A-4	0	0-1	90-100	85-100	50-70	15-40	5-20	NP-4
	8-32	Fine sand, loamy fine sand, sand	SM, SP-SM	A-2	0	0-1	90-100	85-100	50-70	10-35	5-15	NP
	32-72	Gravelly loam, gravelly fine sandy loam, loam	SM, SC-SM, ML, CL-ML	A-4, A-2	0-3	4-15	75-95	60-90	50-80	20-65	10-25	1-10

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
OcA:												
Occur-----------	0-6	Loamy sand	SC-SM, SM	A-1-b, A-2	0	0-10	85-100	80-100	40-80	15-35	5-20	NP-4
	6-29	Loamy sand, cobbly loamy sand, loamy fine sand	SM, SC-SM	A-1-b, A-2	0	0-15	80-100	65-100	35-70	10-35	5-20	NP-4
	29-72	Loam, gravelly fine sandy loam, cobbly fine sandy loam	CL-ML, ML, SC-SM, SM	A-4	0-7	1-15	75-95	60-90	50-80	35-65	10-25	1-8
OcB:												
Occur-----------	0-6	Loamy sand	SM, SC-SM	A-1-b, A-2	0	0-10	85-100	80-100	40-80	15-35	5-20	NP-4
	6-29	Loamy sand, cobbly loamy sand, loamy fine sand	SC-SM, SM	A-1-b, A-2	0	0-15	80-100	65-100	35-70	10-35	5-20	NP-4
	29-72	Loam, gravelly fine sandy loam, cobbly fine sandy loam	CL-ML, SM, SC-SM, ML	A-4	0-7	1-15	75-95	60-90	50-80	35-65	10-25	1-8
OgB:												
Ogdensburg------	0-9	Silt loam	SM, ML	A-4	0-1	0-15	80-100	70-95	50-95	35-80	25-40	2-10
	9-26	Loam, gravelly loam, fine sandy loam	SM, ML, GM, CL-ML	A-2, A-4	0-4	0-15	75-100	60-95	30-95	15-85	15-25	2-7
	26-38	Gravelly loam, very gravelly loam, flaggy silt loam, gravelly sandy loam	SM, ML, GM, CL-ML	A-2, A-4	1-7	1-20	60-90	45-80	35-75	15-70	15-25	2-7
	38-46	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
PeA:												
Peasleeville----	0-11	Loam	SM, ML	A-4	0-1	0-12	85-100	75-98	60-90	40-70	10-25	NP-8
	11-42	Gravelly loam, gravelly fine sandy loam, loam	ML, GM, SM	A-4	0-4	1-15	70-90	55-85	50-80	35-75	10-25	1-8
	42-72	Gravelly loam, gravelly fine sandy loam, loam	SM, SC-SM, ML, CL-ML	A-4	1-7	1-15	65-90	55-85	45-75	30-65	10-20	1-5
PeB:												
Peasleeville----	0-11	Loam	ML, SM	A-4	0-1	0-12	85-100	75-98	60-90	40-70	10-25	NP-8
	11-42	Gravelly loam, gravelly fine sandy loam, loam	SM, GM, ML	A-4	0-4	1-15	70-90	55-85	50-80	35-75	10-25	1-8
	42-72	Gravelly loam, gravelly fine sandy loam, loam	SM, SC-SM, ML, CL-ML	A-4	1-7	1-15	65-90	55-85	45-75	30-65	10-20	1-5
PfB:												
Peasleeville, very stony-----	0-11	Loam	ML, SM	A-4	1-7	0-12	85-100	75-98	60-90	40-70	10-25	NP-8
	11-42	Gravelly loam, gravelly fine sandy loam, loam	GM, ML, SM	A-4	0-4	1-15	70-90	55-85	50-80	35-75	10-25	1-8
	42-72	Gravelly loam, gravelly fine sandy loam, loam	SC-SM, CL-ML, SM, ML	A-4	1-7	1-15	65-90	55-85	45-75	30-65	10-20	1-5
Pg:												
Pinconning, undrained------	0-9	Mucky loamy fine sand	SM	A-2-4, A-4	0	0	100	99-100	50-75	15-45	0-14	NP
	9-36	Fine sand, loamy fine sand, loamy sand	SM, SP-SM	A-2-4, A-4, A-3	0	0	100	99-100	50-75	5-45	0-14	NP
	36-72	Silty clay, silt loam, silty clay, clay	CH, CL	A-7	0	0	100	99-100	90-100	75-95	40-60	25-35

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Ph:												
Pipestone-------	0-7	Fine sand	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	95-100	85-100	40-90	5-35	0-14	NP
	7-19	Fine sand, sand, loamy coarse sand	SP-SM, SM	A-1-b, A-2-4, A-3	0	0	95-100	85-100	40-90	5-30	0-14	NP
	19-26	Sand, fine sand, loamy coarse sand	SP-SM, SM	A-1-b, A-3, A-2-4	0	0	95-100	85-100	40-90	5-30	0-14	NP
	26-72	Sand, fine sand, loamy coarse sand	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	95-100	85-100	40-75	5-30	0-14	NP
Pn:												
Pits, Gravel----	0-6	Very gravelly loamy sand, gravelly loamy sand, extremely gravelly sand	SP-SM, GP, GP-GM, GW	A-3, A-1, A-2	0-1	1-30	50-85	30-70	20-55	0-35	0-14	NP
	6-72	Extremely gravelly sand, extremely gravelly coarse sand, very gravelly coarse sand	GP, GW, SP, SW	A-1	0	0-25	10-55	5-50	0-15	0-5	0-14	NP
Po:												
Pits, Quarry----	0-72	Unweathered bedrock			---	---	---	---	---	---	0-14	---
Pp:												
Pits, Sand------	0-10	Sand	SP, SW	A-1, A-3	0	0	100	80-100	30-60	0-5	0-14	NP
	10-72	Coarse sand, sand, gravelly coarse sand	SW, SP	A-1, A-3	0	0	80-100	50-100	20-60	0-5	0-14	NP
PtA:												
Plainfield------	0-8	Loamy sand	SP-SM, SM	A-1, A-2, A-4	0	0	90-100	85-100	40-90	12-40	0-14	NP
	8-23	Sand, loamy sand	SP, SP-SM, SM	A-1, A-3, A-2	0	0	90-100	85-100	40-70	1-25	0-14	NP
	23-72	Sand, fine sand, coarse sand	SM, SP, SP-SM	A-1, A-2, A-3	0	0	90-100	75-100	40-70	1-25	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
PtB:												
Plainfield	0-8	Loamy sand	SP-SM, SM	A-4, A-2, A-1	0	0	90-100	85-100	40-90	12-40	0-14	NP
	8-23	Sand, loamy sand	SP, SM, SP-SM	A-2, A-3, A-1	0	0	90-100	85-100	40-70	1-25	0-14	NP
	23-72	Sand, fine sand, coarse sand	SP-SM, SM, SP	A-3, A-2, A-1	0	0	90-100	75-100	40-70	1-25	0-14	NP
PtC:												
Plainfield	0-8	Loamy sand	SP-SM, SM	A-1, A-2, A-4	0	0	90-100	85-100	40-90	12-40	0-14	NP
	8-23	Sand, loamy sand	SP-SM, SP, SM	A-1, A-2, A-3	0	0	90-100	85-100	40-70	1-25	0-14	NP
	23-72	Sand, fine sand, coarse sand	SM, SP, SP-SM	A-1, A-2, A-3	0	0	90-100	75-100	40-70	1-25	0-14	NP
PvF:												
Plainfield	0-8	Loamy sand	SP-SM, SM	A-1, A-4, A-2	0	0	90-100	85-100	40-90	12-40	0-14	NP
	8-23	Sand, loamy sand	SP-SM, SP, SM	A-1, A-3, A-2	0	0	90-100	85-100	40-70	1-25	0-14	NP
	23-72	Sand, fine sand, coarse sand	SP-SM, SP, SM	A-3, A-2, A-1	0	0	90-100	75-100	40-70	1-25	0-14	NP
Grattan	0-3	Moderately decomposed plant material			---	---	---	---	---	---	---	---
	3-11	Loamy sand	SM, SP-SM	A-1-b, A-2-4	0	0	95-100	90-100	45-75	10-30	0-14	NP
	11-41	Sand, loamy sand	SM, SP, SP-SM	A-3, A-2-4, A-1-b	0	0	95-100	90-100	45-75	3-30	0-14	NP
	41-72	Sand, coarse sand	SP-SM, SP, SM	A-1-b, A-3, A-2-4	0	0	95-100	90-100	45-70	0-15	0-14	NP
RoB:												
Rock Outcrop	0-72	Unweathered bedrock			---	---	---	---	---	---	---	---
Ricker	0-3	Peat	PT	A-8	0-7	0	---	---	---	---	---	---
	3-5	Mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	5-6	Muck	PT	A-8	0	0	---	---	---	---	---	---
	6-7	Loam, very channery coarse sand, very channery silt loam	ML, SM, GM	A-4, A-1, A-2	0-7	0-30	70-100	35-100	25-95	5-75	---	NP
	7-15	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Rr:												
Roundabout------	0-9	Silt loam	ML	A-4	0	0	100	90-100	80-100	55-95	0-30	NP-4
	9-31	Very fine sandy loam, silt loam	ML	A-4	0	0	100	90-100	80-100	55-95	0-30	NP-4
	31-72	Silt loam, silty clay loam, very fine sandy loam	ML	A-4	0	0	100	95-100	90-100	70-95	0-35	NP-4
Ry:												
Runeberg--------	0-9	Mucky loam	CL-ML, ML	A-4	0-1	0-15	90-100	80-95	65-90	50-80	0-25	NP-5
	9-22	Cobbly loam, sandy loam, gravelly fine sandy loam	SM, SC-SM, SC, ML	A-4, A-2	0-1	1-15	80-100	75-95	50-80	30-60	15-25	3-10
	22-72	Fine sandy loam, gravelly fine sandy loam, sandy loam, loam	ML, SM, SC-SM, SC	A-4, A-2	0-1	1-15	85-100	75-95	50-80	30-60	15-25	3-10
Sb:												
Sabattis, undrained; very bouldery-------	0-8	Highly decomposed plant material		A-8	0-7	0	---	---	---	---	---	---
	8-11	Mucky fine sandy loam	SM, OL, ML, CL-ML	A-2, A-4	0-7	0-15	80-100	60-95	50-90	25-85	0-30	NP-10
	11-26	Cobbly sandy loam, gravelly fine sandy loam, silt loam	ML, SM, CL-ML, GM	A-2, A-4	0-4	1-15	80-95	60-95	40-75	20-60	0-30	NP-10
	26-72	Gravelly fine sandy loam, fine sandy loam, cobbly sandy loam, loam	SM, GC-GM, GM, ML	A-2, A-4	1-7	1-16	55-92	50-85	40-75	20-60	0-30	NP-10

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Se:												
Saprists, ponded	0-7	Mucky peat	PT	A-8	---	---	---	---	---	---	0-14	---
	7-30	Muck	PT	A-8	---	---	---	---	---	---	0-14	---
	30-72	Fine sandy loam, silt loam, sandy loam, gravelly loam, very gravelly loamy sand, sand, silty clay	SM, SC, ML, CL	A-2, A-4, A-6	0-2	0-2	75-100	50-100	45-95	25-95	15-30	NP-12
Aquents, ponded-	0-9	Mucky silt loam	ML, CL, CL-ML	A-4	0	0-5	90-100	85-100	75-100	50-90	17-32	2-10
	9-72	Gravelly loamy sand, silt loam, silty clay, sand, fine sandy loam	CL, SM, ML	A-2, A-4, A-6	0	0-10	60-100	55-100	30-100	15-90	10-50	NP-30
ShB:												
Schroon---------	0-8	Fine sandy loam	SM, CL-ML, ML, SC-SM	A-4, A-2	0-1	0-15	80-98	65-95	50-85	25-70	0-25	NP-5
	8-23	Fine sandy loam, gravelly fine sandy loam, sandy loam, loam	GM, ML, SM	A-2, A-4	0-2	1-15	80-95	60-90	40-80	25-65	0-25	NP-3
	23-72	Gravelly fine sandy loam, fine sandy loam, sandy loam	SM, GM	A-4, A-2, A-1-b	1-7	1-23	70-95	60-90	40-75	20-50	0-14	NP
ShC:												
Schroon---------	0-8	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0-1	0-15	80-98	65-95	50-85	25-70	0-25	NP-5
	8-23	Fine sandy loam, gravelly fine sandy loam, sandy loam, loam	SM, ML, GM	A-2, A-4	0-2	1-15	80-95	60-90	40-80	25-65	0-25	NP-3
	23-72	Gravelly fine sandy loam, fine sandy loam, sandy loam	GM, SM	A-1-b, A-2, A-4	1-7	1-23	70-95	60-90	40-75	20-50	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
SkB:												
Schroon, very stony----------	0-8	Fine sandy loam	CL-ML, SM, SC-SM, ML	A-2, A-4	1-7	0-15	80-98	65-95	50-85	25-70	0-25	NP-5
	8-23	Fine sandy loam, gravelly fine sandy loam, sandy loam, loam	GM, ML, SM	A-2, A-4	0-2	1-15	80-95	60-90	40-80	25-65	0-25	NP-3
	23-72	Gravelly fine sandy loam, fine sandy loam, sandy loam	GM, SM	A-1-b, A-2, A-4	1-7	1-23	70-95	60-90	40-75	20-50	0-14	NP
Sn:												
Sciota----------	0-9	Fine sand	SM	A-2-4	0	0	100	100	65-80	20-35	0-14	NP
	9-37	Fine sand, loamy fine sand	SM	A-2-4	0	0	100	95-100	60-80	15-35	0-14	NP
	37-72	Loamy fine sand, fine sand, sand	SP-SM, SM	A-2-4, A-3	0	0	100	95-100	50-80	5-35	0-14	NP
So:												
Shaker----------	0-9	Loam	ML	A-4	0	0	100	95-100	80-90	55-75	0-30	NP-6
	9-25	Very fine sandy loam, fine sandy loam, loam	SM, ML	A-4, A-2	0	0	100	95-100	60-90	30-70	0-30	NP-6
	25-72	Clay, silty clay, silty clay loam	CL	A-7, A-6	0	0	100	95-100	90-100	80-100	30-50	12-25
SpB:												
Sheddenbrook----	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	1-7	Gravelly loamy fine sand	SM, SP-SM, ML	A-2, A-1-b, A-4	0-1	0-15	70-100	60-100	40-85	10-55	0-14	NP
	7-27	Gravelly loamy sand, gravelly sand, loamy fine sand	SM, SP-SM	A-3, A-1, A-2	0-1	0-15	70-100	50-100	30-80	5-35	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
SpB:												
Sheddenbrook----	27-30	Gravelly loamy sand, gravelly sand, loamy fine sand	SM, SP-SM	A-2, A-1, A-3	0-1	0-15	65-100	50-100	30-80	5-35	0-14	NP
	30-38	Unweathered bedrock			---	---	---	---	---	---	0-14	---
SrB:												
Skerry----------	0-5	Fine sandy loam	SM, SC, SC-SM	A-2, A-4	0-1	0-10	80-95	70-90	45-75	30-50	0-30	NP-10
	5-24	Fine sandy loam, gravelly sandy loam, gravelly fine sandy loam	SM, SC-SM, SC	A-4, A-2	0-4	0-15	75-95	60-95	45-75	20-45	0-25	NP-10
	24-72	Gravelly sandy loam, gravelly fine sandy loam, loamy sand	GM, GP-GM, SP-SM, SM	A-2, A-1	1-7	1-20	65-90	50-85	30-70	10-35	0-14	NP
SsB:												
Skerry, very bouldery-------	0-5	Fine sandy loam	SC, SC-SM, SM	A-2, A-4	1-7	0-10	80-95	70-90	45-75	30-50	0-30	NP-10
	5-24	Fine sandy loam, gravelly sandy loam, gravelly fine sandy loam	SC, SM, SC-SM	A-2, A-4	0-4	0-15	75-95	60-95	45-75	20-45	0-25	NP-10
	24-72	Gravelly sandy loam, gravelly fine sandy loam, loamy sand	SP-SM, SM, GP-GM, GM	A-2, A-1	1-7	1-20	65-90	50-85	30-70	10-35	0-14	NP
SsC:												
Skerry, very bouldery-------	0-5	Fine sandy loam	SC, SM, SC-SM	A-2, A-4	1-7	0-10	80-95	70-90	45-75	30-50	0-30	NP-10
	5-24	Fine sandy loam, gravelly sandy loam, gravelly fine sandy loam	SC-SM, SC, SM	A-2, A-4	0-4	0-15	75-95	60-95	45-75	20-45	0-25	NP-10
	24-72	Gravelly sandy loam, gravelly fine sandy loam, loamy sand	SP-SM, SM, GP-GM, GM	A-1, A-2	1-7	1-20	65-90	50-85	30-70	10-35	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
StD: Success, very bouldery-------	0-8	Cobbly sandy loam	SM	A-1, A-2, A-4	1-7	5-30	70-90	50-80	30-60	15-40	0-40	NP-10
	8-18	Gravelly sandy loam, very gravelly sandy loam, gravelly fine sandy loam	GM, SM	A-1, A-2, A-4	0-4	5-30	60-90	30-75	25-60	15-40	0-40	NP-10
	18-37	Very cobbly loamy sand, very gravelly loamy sand, gravelly sand	GM, SM, SP-SM	A-3, A-1, A-2	0-4	5-38	55-80	25-70	20-55	5-25	0-14	NP
	37-72	Gravelly loamy sand, very gravelly loamy sand, cobbly sand	SP-SM, SM, GP-GM, GM	A-3, A-2, A-1	0-4	5-38	55-85	30-80	20-55	2-25	0-14	NP
SwB: Sunapee---------	0-7	Fine sandy loam	CL-ML, ML	A-6, A-4	0-1	0-15	80-95	75-95	50-85	30-65	20-40	2-12
	7-39	Fine sandy loam, gravelly fine sandy loam, sandy loam	ML, SM	A-2, A-4	0-4	0-10	80-95	70-90	50-80	25-60	0-25	NP-3
	39-72	Gravelly fine sandy loam, fine sandy loam, gravelly sandy loam, gravelly loamy sand	SM, ML	A-2, A-4	1-7	0-15	60-95	50-85	40-75	20-50	0-14	NP
SxB: Sunapee, very bouldery-------	0-7	Fine sandy loam	CL-ML, ML	A-4, A-6	1-7	0-15	80-95	75-95	50-85	30-65	20-40	2-12
	7-39	Fine sandy loam, gravelly fine sandy loam, sandy loam	SM, ML	A-2, A-4	0-4	0-10	80-95	70-90	50-80	25-60	0-25	NP-3

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
SxB:												
Sunapee, very												
	39-72	Gravelly fine sandy loam, fine sandy loam, gravelly sandy loam, gravelly loamy sand	ML, SM	A-2, A-4	1-7	0-15	60-95	50-85	40-75	20-50	0-14	NP
Sz:												
Swanton---------	0-9	Very fine sandy loam	CL, SM, SC, ML	A-2, A-4	0	0	100	95-100	60-95	30-65	0-30	NP-9
	9-31	Fine sandy loam, sandy loam	SM, SC, ML, CL	A-2, A-4	0	0	100	95-100	60-95	30-65	0-30	NP-9
	31-72	Silty clay, clay, silty clay loam	CH, CL	A-6, A-7	0	0	100	99-100	95-100	90-100	25-55	11-30
TcB:												
Topknot---------	0-7	Cobbly loam	SM, ML	A-4, A-2	0-4	1-30	75-95	60-85	45-85	30-65	8-20	NP-5
	7-14	Gravelly loam, gravelly fine sandy loam, gravelly sandy loam	ML, SM	A-4, A-2	0-4	1-30	75-95	60-85	45-85	30-65	8-20	NP-5
	14-22	Unweathered bedrock			---	---	---	---	---	---	0-14	---
Chazy-----------	0-10	Loam	ML, SM	A-4	0-2	0-24	75-95	65-90	50-85	35-70	25-35	NP-5
	10-28	Fine sandy loam, gravelly loam, gravelly fine sandy loam	CL-ML, GM, ML, SM	A-4	0-4	1-24	75-92	65-90	50-85	30-70	10-25	NP-5
	28-36	Unweathered bedrock			---	---	---	---	---	---	0-14	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
TnC:												
Tunbridge, very bouldery-------	0-4	Fine sandy loam	ML, SM	A-2, A-4	1-7	0-10	85-98	75-95	30-90	15-60	0-20	NP-2
	4-26	Gravelly loam, loam, gravelly fine sandy loam, sandy loam, silt loam	ML, SM	A-2, A-5	0-3	0-15	75-95	65-95	25-95	20-85	0-50	NP-6
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Lyman, very bouldery-------	0-3	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-6	Fine sandy loam	SM, ML	A-2, A-4	1-7	0-15	85-98	75-95	55-80	30-55	0-30	NP-6
	6-17	Fine sandy loam, gravelly fine sandy loam, loam, silt loam	GM, SM, ML	A-1, A-2, A-4	0-4	0-15	80-95	60-90	45-75	20-60	0-30	NP-4
	17-25	Unweathered bedrock			---	---	---	---	---	---	---	---
TnE:												
Tunbridge, very bouldery-------	0-4	Fine sandy loam	SM, ML	A-2, A-4	1-7	0-10	85-98	75-95	30-90	15-60	0-20	NP-2
	4-26	Gravelly loam, loam, gravelly fine sandy loam, sandy loam, silt loam	SM, ML	A-2, A-5	0-3	0-15	75-95	65-95	25-95	20-85	0-50	NP-6
	26-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Lyman, very bouldery-------	0-3	Highly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	3-6	Fine sandy loam	ML, SM	A-2, A-4	1-7	0-15	85-98	75-95	55-80	30-55	0-30	NP-6

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
Lyman, very bouldery-------	6-17	Fine sandy loam, gravelly fine sandy loam, loam, silt loam	GM, SM, ML	A-1, A-2, A-4	0-4	0-15	80-95	60-90	45-75	20-60	0-30	NP-4
	17-25	Unweathered bedrock			---	---	---	---	---	---	---	---
Ud:												
Udipsamments, smoothed-------	0-6	Fine sand	SP, SM	A-1	0	0	92-100	85-100	40-80	0-35	---	---
	6-72	Sand, fine sand, loamy sand	SP, SM	A-1	0	0	85-100	85-100	40-80	0-35	---	---
Psammaquents, smoothed-------	0-6	Fine sand	SM, SP	A-1	0	0	92-100	85-100	40-80	0-35	---	---
	6-72	Sand, fine sand, loamy sand	SP, SM	A-1	0	0	85-100	85-100	40-80	0-35	---	---
Ue:												
Udipsamments, Mine Spoil, non-acid-------	0-72	Sand	SP-SM, SM	A-1, A-2	0	0-2	90-100	80-100	40-75	5-25	0-14	NP
Uf:												
Udorthents, Refuse Substratum-----	0-6	Loam	SM, ML, CL, SC	A-2, A-4	0	0-4	80-100	75-100	30-100	10-90	0-30	NP-15
	6-72	Variable			---	---	---	---	---	---	---	---
Ug:												
Udorthents, smoothed-------	0-4	Loam	SM, SC, ML, CL	A-2, A-4, A-6	0	0-5	80-100	75-100	55-100	30-95	0-45	NP-15
	4-72	Very gravelly sandy loam, gravelly fine sandy loam, channery loam, silt loam, silty clay loam	CL, GM, ML, SC	A-2, A-4, A-6, A-1	0	0-10	60-100	50-100	20-100	10-95	0-45	NP-15

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Uh:												
Udorthents, wet substratum-----	0-4	Loam	CL, ML, SC, SM	A-2, A-4, A-6	0	0-5	80-100	75-100	55-100	30-95	0-45	NP-15
	4-72	Very gravelly sandy loam, gravelly fine sandy loam, channery loam, silt loam, silty clay loam	GM, CL, ML, SC	A-6, A-1, A-4, A-2	0	0-10	60-100	50-100	20-100	10-95	0-45	NP-15
Un:												
Urban Land------	0-6	Variable			---	---	---	---	---	---	0-14	---
UpA:												
Urban Land------	0-6	Variable			---	---	---	---	---	---	0-14	---
Plainfield------	0-8	Loamy sand	SP-SM, SM	A-2, A-4, A-1	0	0	90-100	85-100	40-90	12-40	0-14	NP
	8-23	Sand, loamy sand	SP, SM, SP-SM	A-1, A-3, A-2	0	0	90-100	85-100	40-70	1-25	0-14	NP
	23-72	Sand, fine sand, coarse sand	SM, SP, SP-SM	A-3, A-1, A-2	0	0	90-100	75-100	40-70	1-25	0-14	NP
UpB:												
Urban Land------	0-6	Variable			---	---	---	---	---	---	0-14	---
Plainfield------	0-8	Loamy sand	SM, SP-SM	A-1, A-2, A-4	0	0	90-100	85-100	40-90	12-40	0-14	NP
	8-23	Sand, loamy sand	SP, SM, SP-SM	A-1, A-2, A-3	0	0	90-100	85-100	40-70	1-25	0-14	NP
	23-72	Sand, fine sand, coarse sand	SM, SP, SP-SM	A-1, A-2, A-3	0	0	90-100	75-100	40-70	1-25	0-14	NP
W:												
Water, areas < 40 acres-------	---	---	---	---	---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
WdB:												
Waddington------	0-9	Gravelly loam	GM, SC-SM, SM, CL-ML	A-1, A-2-4, A-4	---	0-25	50-90	45-80	45-80	15-65	17-30	NP-10
	9-26	Gravelly fine sandy loam, very gravelly loam	CL, CL-ML, SM, SP-SM	A-1, A-2-4, A-4	---	0-25	50-90	40-80	25-80	10-60	10-30	NP-10
	26-31	Very gravelly loamy sand, very gravelly sand, very gravelly sandy loam	GM, GP-GM, GW-GM, SM	A-1, A-2-4	---	0-25	50-85	40-85	20-50	5-30	0-10	NP-4
	31-72	Stratified extremely gravelly coarse sand, very gravelly loamy sand, very gravelly sandy loam	GW-GM, GP	A-1	---	4-30	45-75	25-45	10-25	0-10	0-10	NP-4
Wn:												
Wainola, high ppt.-----------	0-1	Slightly decomposed plant material	PT	A-8	0	0	---	---	---	---	---	---
	1-7	Loamy fine sand, fine sand	SM	A-2-4	0	0	100	90-100	50-80	15-50	0-14	NP
	7-22	Fine sand, loamy fine sand, very fine sand	ML, SM	A-2-4, A-4	0	0	100	90-100	50-80	15-50	0-14	NP
	22-34	Fine sand, loamy fine sand, very fine sand	ML, SM	A-2-4, A-4	0	0	100	90-100	50-80	15-50	0-14	NP
	34-72	Fine sand, loamy fine sand, very fine sand	SM	A-2-4	0	0	100	90-100	50-80	15-35	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
WsB:												
Wallace---------	0-8	Fine sand	SM	A-2-4	0	0	95-100	90-100	50-90	5-35	---	NP
	8-33	Fine sand, sand	SM, SP-SM	A-3, A-2-4	0	0	95-100	90-100	50-80	5-35	---	NP
	33-72	Sand, fine sand	SP-SM, SM	A-2-4, A-3	0	0	95-100	90-100	50-80	5-30	---	NP
WsC:												
Wallace---------	0-8	Fine sand	SM	A-2-4	0	0	95-100	90-100	50-90	5-35	---	NP
	8-33	Fine sand, sand	SP-SM, SM	A-3, A-2-4	0	0	95-100	90-100	50-80	5-35	---	NP
	33-72	Sand, fine sand	SM, SP-SM	A-3, A-2-4	0	0	95-100	90-100	50-80	5-30	---	NP
WsE:												
Wallace---------	0-8	Fine sand	SM	A-2-4	0	0	95-100	90-100	50-90	5-35	---	NP
	8-33	Fine sand, sand	SP-SM, SM	A-2-4, A-3	0	0	95-100	90-100	50-80	5-35	---	NP
	33-72	Sand, fine sand	SM, SP-SM	A-2-4, A-3	0	0	95-100	90-100	50-80	5-30	---	NP
Wu:												
Wonsqueak-------	0-7	Muck	PT	A-8	0	0	---	---	---	---	---	---
	7-31	Muck	PT	A-8	0	0	---	---	---	---	---	---
	31-72	Silt loam, fine sandy loam, loam, silty clay loam	SM, CL, CL-ML, ML	A-2, A-4, A-6	0	0-5	85-100	80-100	60-100	30-95	0-40	NP-20
Za:												
Denied Access---	---	---	---	---	---	---	---	---	---	---	---	---

Table 15.—Physical Properties of the Soils

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodibility group	Wind erodibility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
15:												
Loxley, undrained, high ppt.----------	0-16	0-0	0.30-0.40	0.6-6	0.45-0.55	---	70-100	---	---	3	5	56
	16-72	0-0	0.10-0.35	0.2-6	0.35-0.45	---	70-99	---	---			
Beseman, undrained--	0-2	0-0	0.10-0.20	0.6-6	0.20-0.50	---	50-100	---	---	2	5	56
	2-10	0-0	0.10-0.20	0.6-6	0.55-0.65	---	50-100	---	---			
	10-45	0-0	0.10-0.25	0.6-6	0.55-0.65	---	25-75	---	---			
	45-72	7-27	1.55-1.95	0.2-0.6	0.11-0.18	3.0-5.9	0.0-0.5	.28	.37			
17:												
Beseman, undrained--	0-2	0-0	0.10-0.20	0.6-6	0.20-0.50	---	50-100	---	---	2	5	56
	2-10	0-0	0.10-0.20	0.6-6	0.55-0.65	---	50-100	---	---			
	10-45	0-0	0.10-0.25	0.6-6	0.55-0.65	---	25-75	---	---			
	45-72	4-27	1.55-1.95	0.2-0.6	0.11-0.18	3.0-5.9	0.0-0.5	.28	.37			
Rumney--------------	0-12	7-20	1.10-1.40	0.6-6	0.16-0.27	0.0-2.9	4.0-12	.28	.28	3	5	56
	12-39	7-20	1.15-1.45	0.6-6	0.12-0.22	0.0-2.9	0.0-2.0	.37	.37			
	39-72	0-15	1.30-1.50	6-20	0.04-0.13	0.0-2.9	0.0-1.0	.20	.24			
Loxley, undrained---	0-16	0-0	0.30-0.40	0.6-6	0.45-0.55	---	70-100	---	---	3	5	56
	16-72	0-0	0.10-0.35	0.2-6	0.35-0.45	---	70-99	---	---			
367:												
Searsport-----------	0-8	0-0	0.55-0.75	0.2-6	0.20-0.45	---	30-99	---	---	5	5	0
	8-50	0-10	1.35-1.55	6-20	0.01-0.09	0.0-2.9	0.0-0.5	.17	.17			
	50-72	0-5	1.35-1.55	6-20	0.01-0.09	0.0-2.9	0.0-0.5	.10	.15			
Borosaprists--------	0-7	0-0	0.30-0.60	0.2-6	0.35-0.45	0.0-2.9	50-100	---	---	3	2	134
	7-30	0-0	0.30-0.60	0.2-6	0.35-0.45	0.0-2.9	50-100	---	---			
	30-72	4-45	1.55-1.95	0.2-20	0.11-0.18	3.0-5.9	0.0-0.5	.28	.37			
Naumburg------------	0-2	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	5	2	134
	2-3	0-0	---	0.2-6	0.40-0.60	---	35-80	---	---			
	3-7	1-8	1.20-1.50	2-6	0.05-0.09	0.0-2.9	1.0-4.0	.17	.17			
	7-33	0-10	1.20-1.50	6-20	0.06-0.08	0.0-2.9	---	.17	.17			
	33-72	0-10	1.45-1.65	6-20	0.04-0.06	0.0-2.9	---	.17	.17			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
375C:												
Colton---------------	0-1	0-0	---	0.2-6	0.20-0.60	---	35-80	---	---	5	3	86
	1-3	1-5	1.10-1.40	6-20	0.03-0.12	0.0-2.9	1.0-4.0	.15	.20			
	3-22	0-5	1.25-1.55	6-20	0.02-0.05	0.0-2.9	0.0-6.0	.15	.17			
	22-72	0-3	1.45-1.65	20-101	0.01-0.02	0.0-2.9	---	.10	.17			
Adams---------------	0-7	2-10	1.00-1.30	6-20	0.06-0.12	0.0-2.9	2.0-6.0	.17	.17	5	2	134
	7-9	2-15	1.00-1.30	6-20	0.08-0.16	0.0-2.9	1.0-3.0	.17	.17			
	9-27	0-5	1.10-1.45	6-20	0.03-0.10	0.0-2.9	1.0-3.0	.17	.17			
	27-72	0-5	1.20-1.50	20-101	0.03-0.04	0.0-2.9	0.0-0.5	.17	.17			
375F:												
Colton---------------	0-1	0-0	---	0.2-6	0.20-0.60	---	35-80	---	---	5	3	86
	1-3	1-5	1.10-1.40	6-20	0.03-0.12	0.0-2.9	1.0-4.0	.15	.20			
	3-22	0-5	1.25-1.55	6-20	0.02-0.05	0.0-2.9	0.0-6.0	.15	.17			
	22-72	0-3	1.45-1.65	20-101	0.01-0.02	0.0-2.9	---	.10	.17			
Adams---------------	0-7	2-10	1.00-1.30	6-20	0.06-0.12	0.0-2.9	2.0-6.0	.17	.17	5	2	134
	7-9	2-15	1.00-1.30	6-20	0.08-0.16	0.0-2.9	1.0-3.0	.17	.17			
	9-27	0-5	1.10-1.45	6-20	0.03-0.10	0.0-2.9	1.0-3.0	.17	.17			
	27-72	0-5	1.20-1.50	20-101	0.03-0.04	0.0-2.9	0.0-0.5	.17	.17			
651C:												
Monadnock, very bouldery-----------	0-2	2-18	0.80-1.20	0.6-2	0.15-0.21	0.0-2.9	1.0-6.0	.28	.28	3	8	86
	2-36	2-18	0.80-1.30	0.6-2	0.09-0.17	0.0-2.9	---	.28	.28			
	36-72	2-8	1.30-1.60	2-6	0.04-0.08	0.0-2.9	---	.17	.20			
Tunbridge, very bouldery-----------	0-4	2-18	0.80-1.20	0.6-6	0.11-0.21	0.0-2.9	2.0-8.0	.20	.24	2	8	0
	4-26	2-18	1.20-1.40	0.6-6	0.10-0.21	0.0-2.9	1.0-6.0	.20	.28			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			
Sabattis, undrained; very bouldery------	0-8	0-0	---	0.2-6	0.55-0.65	---	35-80	---	---	5	8	56
	8-11	2-18	0.80-1.10	0.6-6	0.14-0.25	0.0-2.9	6.0-20	.28	.28			
	11-26	2-18	1.30-1.60	0.6-6	0.08-0.18	0.0-2.9	0.0-3.0	.24	.28			
	26-72	2-18	1.40-1.70	0.2-0.6	0.07-0.14	0.0-2.9	0.0-1.0	.24	.28			
651D:												
Monadnock, very bouldery-----------	0-2	2-18	0.80-1.20	0.6-2	0.15-0.21	0.0-2.9	1.0-6.0	.28	.28	3	8	86
	2-36	2-18	0.80-1.30	0.6-2	0.09-0.17	0.0-2.9	---	.28	.28			
	36-72	2-8	1.30-1.60	2-6	0.04-0.08	0.0-2.9	---	.17	.20			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
651D												
Tunbridge, very bouldery-----------	0-4	2-18	0.80-1.20	0.6-6	0.11-0.21	0.0-2.9	2.0-8.0	.20	.24	2	8	0
	4-26	2-18	1.20-1.40	0.6-6	0.10-0.21	0.0-2.9	1.0-6.0	.20	.28			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			
653C:												
Monadnock, very bouldery-----------	0-2	2-18	0.80-1.20	0.6-2	0.15-0.21	0.0-2.9	1.0-6.0	.28	.28	3	8	86
	2-36	2-18	0.80-1.30	0.6-2	0.09-0.17	0.0-2.9	---	.28	.28			
	36-72	2-8	1.30-1.60	2-6	0.04-0.08	0.0-2.9	---	.17	.20			
654C:												
Monadnock, very bouldery-----------	0-2	2-18	0.80-1.20	0.6-2	0.15-0.21	0.0-2.9	1.0-6.0	.28	.28	3	8	86
	2-36	2-18	0.80-1.30	0.6-2	0.09-0.17	0.0-2.9	---	.28	.28			
	36-72	2-8	1.30-1.60	2-6	0.04-0.08	0.0-2.9	---	.17	.20			
Sabattis, very bouldery-----------	0-8	0-0	---	0.2-6	0.55-0.65	---	35-80	---	---	5	8	56
	8-11	2-18	0.80-1.10	0.6-6	0.14-0.25	0.0-2.9	6.0-20	.28	.28			
	11-26	2-18	1.30-1.60	0.6-6	0.08-0.18	0.0-2.9	0.0-3.0	.24	.28			
	26-72	2-18	1.40-1.70	0.2-0.6	0.07-0.14	0.0-2.9	0.0-1.0	.24	.28			
655B:												
Sunapee, very bouldery-----------	0-7	2-18	0.80-1.20	0.6-2	0.16-0.22	0.0-2.9	2.0-8.0	.28	.28	5	8	86
	7-39	2-18	0.80-1.30	0.6-2	0.07-0.17	0.0-2.9	---	.20	.24			
	39-72	2-18	1.20-1.50	0.6-6	0.03-0.17	0.0-2.9	---	.20	.24			
Monadnock, very bouldery-----------	0-2	2-18	0.80-1.20	0.6-2	0.15-0.21	0.0-2.9	1.0-6.0	.28	.28	3	8	86
	2-36	2-18	0.80-1.30	0.6-2	0.09-0.17	0.0-2.9	---	.28	.28			
	36-72	2-8	1.30-1.60	2-6	0.04-0.08	0.0-2.9	---	.17	.20			
661C:												
Hermon, very bouldery-----------	0-6	2-18	0.85-1.20	2-20	0.07-0.15	0.0-2.9	1.0-8.0	.10	.17	5	8	0
	6-10	2-18	0.85-1.20	2-20	0.07-0.20	0.0-2.9	3.0-7.0	.10	.15			
	10-37	2-7	0.85-1.30	2-20	0.05-0.10	0.0-2.9	0.5-3.0	.10	.17			
	37-72	1-4	1.10-1.70	6-20	0.02-0.06	0.0-2.9	0.0-0.5	.10	.17			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
661D:												
Hermon, very bouldery-----------	0-6	2-18	0.85-1.20	2-20	0.07-0.15	0.0-2.9	1.0-8.0	.10	.17	5	8	0
	6-10	2-18	0.85-1.20	2-20	0.07-0.20	0.0-2.9	3.0-7.0	.10	.15			
	10-37	2-7	0.85-1.30	2-20	0.05-0.10	0.0-2.9	0.5-3.0	.10	.17			
	37-72	1-4	1.10-1.70	6-20	0.02-0.06	0.0-2.9	0.0-0.5	.10	.17			
708B:												
Adirondack, very bouldery-----------	0-5	2-20	1.00-1.30	0.6-2	0.15-0.21	0.0-2.9	2.0-10	.20	.24	3	8	0
	5-22	2-18	1.20-1.50	0.6-2	0.14-0.20	0.0-2.9	0.0-1.0	.20	.24			
	22-72	2-16	1.70-2.00	0.06-0.2	0.04-0.10	0.0-2.9	0.0-1.0	.20	.24			
Sabattis, undrained; very bouldery------	0-8	0-0	---	0.2-6	0.55-0.65	---	35-80	---	---	5	8	56
	8-11	2-18	0.80-1.10	0.6-6	0.14-0.25	0.0-2.9	6.0-20	.28	.28			
	11-26	2-18	1.30-1.60	0.6-6	0.08-0.18	0.0-2.9	0.0-3.0	.24	.28			
	26-72	2-18	1.40-1.70	0.2-0.6	0.07-0.14	0.0-2.9	0.0-1.0	.24	.28			
Tughill, very bouldery-----------	0-13	4-18	1.00-1.35	0.6-2	0.18-0.25	0.0-2.9	10-20	.28	.28	3	8	56
	13-37	4-18	1.20-1.50	0.2-0.6	0.06-0.10	0.0-2.9	0.0-3.0	.20	.28			
	37-72	3-18	1.70-1.95	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.20	.28			
721C:												
Becket, very bouldery-----------	0-4	2-20	0.60-1.20	0.6-2	0.10-0.23	0.0-2.9	2.0-6.0	.20	.20	5	8	86
	4-23	2-18	1.30-1.60	0.6-2	0.06-0.16	0.0-2.9	---	.28	.32			
	23-72	2-18	1.60-1.75	0.06-0.6	0.03-0.09	0.0-2.9	---	.17	.24			
Tunbridge, very bouldery-----------	0-4	2-18	0.80-1.20	0.6-6	0.11-0.21	0.0-2.9	2.0-8.0	.20	.24	2	8	0
	4-26	2-18	1.20-1.40	0.6-6	0.10-0.21	0.0-2.9	1.0-6.0	.20	.28			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			
Skerry, very bouldery-----------	0-5	2-20	0.60-1.20	0.6-2	0.10-0.23	0.0-2.9	2.0-8.0	.24	.24	5	8	86
	5-24	2-18	1.30-1.60	0.6-2	0.06-0.16	0.0-2.9	---	.28	.32			
	24-72	2-18	1.60-1.75	0.06-0.6	0.03-0.09	0.0-2.9	---	.17	.24			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
721D:												
Becket, very bouldery-----------	0-4	2-20	0.60-1.20	0.6-2	0.10-0.23	0.0-2.9	2.0-6.0	.20	.20	5	8	86
	4-23	2-18	1.30-1.60	0.6-2	0.06-0.16	0.0-2.9	---	.28	.32			
	23-72	2-18	1.60-1.75	0.06-0.6	0.03-0.09	0.0-2.9	---	.17	.24			
Tunbridge, very bouldery-----------	0-4	2-18	0.80-1.20	0.6-6	0.11-0.21	0.0-2.9	2.0-8.0	.20	.24	2	8	0
	4-26	2-18	1.20-1.40	0.6-6	0.10-0.21	0.0-2.9	1.0-6.0	.20	.28			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			
723C:												
Becket, very bouldery-----------	0-4	2-20	0.60-1.20	0.6-2	0.10-0.23	0.0-2.9	2.0-6.0	.20	.20	5	8	86
	4-23	2-18	1.30-1.60	0.6-2	0.06-0.16	0.0-2.9	---	.28	.32			
	23-72	2-18	1.60-1.75	0.06-0.6	0.03-0.09	0.0-2.9	---	.17	.24			
723D:												
Becket, very bouldery-----------	0-4	2-20	0.60-1.20	0.6-2	0.10-0.23	0.0-2.9	2.0-6.0	.20	.20	5	8	86
	4-23	2-18	1.30-1.60	0.6-2	0.06-0.16	0.0-2.9	---	.28	.32			
	23-72	2-18	1.60-1.75	0.06-0.6	0.03-0.09	0.0-2.9	---	.17	.24			
725B:												
Skerry, very bouldery-----------	0-5	2-20	0.60-1.20	0.6-2	0.10-0.23	0.0-2.9	2.0-8.0	.24	.24	5	8	86
	5-24	2-18	1.30-1.60	0.6-2	0.06-0.16	0.0-2.9	---	.28	.32			
	24-72	2-18	1.60-1.75	0.06-0.6	0.03-0.09	0.0-2.9	---	.17	.24			
Becket, very bouldery-----------	0-4	2-20	0.60-1.20	0.6-2	0.10-0.23	0.0-2.9	2.0-6.0	.20	.20	5	8	86
	4-23	2-18	1.30-1.60	0.6-2	0.06-0.16	0.0-2.9	---	.28	.32			
	23-72	2-18	1.60-1.75	0.06-0.6	0.03-0.09	0.0-2.9	---	.17	.24			
727B:												
Skerry, very bouldery-----------	0-5	2-20	0.60-1.20	0.6-2	0.10-0.23	0.0-2.9	2.0-8.0	.24	.24	5	8	86
	5-24	2-18	1.30-1.60	0.6-2	0.06-0.16	0.0-2.9	---	.28	.32			
	24-72	2-18	1.60-1.75	0.06-0.6	0.03-0.09	0.0-2.9	---	.17	.24			
Adirondack, very bouldery-----------	0-5	2-20	1.00-1.30	0.6-2	0.15-0.21	0.0-2.9	2.0-10	.20	.24	3	8	0
	5-22	2-18	1.20-1.50	0.6-2	0.14-0.20	0.0-2.9	0.0-1.0	.20	.24			
	22-72	2-16	1.70-2.00	0.06-0.2	0.04-0.10	0.0-2.9	0.0-1.0	.20	.24			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
831C:												
Tunbridge, very bouldery-----------	0-4	2-18	0.80-1.20	0.6-6	0.11-0.21	0.0-2.9	2.0-8.0	.20	.24	2	8	0
	4-26	2-18	1.20-1.40	0.6-6	0.10-0.21	0.0-2.9	1.0-6.0	.20	.28			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			
Lyman, very bouldery	0-3	0-0	---	0.2-6	0.25-0.65	---	35-80	---	---	1	8	---
	3-6	2-20	0.75-1.20	2-6	0.13-0.24	0.0-2.9	1.0-6.0	.20	.28			
	6-17	2-20	0.90-1.40	2-6	0.08-0.28	0.0-2.9	---	.32	.37			
	17-25	---	---	0.0000-0.0015	---	---	---	---	---			
831D:												
Tunbridge, very bouldery-----------	0-4	2-18	0.80-1.20	0.6-6	0.11-0.21	0.0-2.9	2.0-8.0	.20	.24	2	8	0
	4-26	2-18	1.20-1.40	0.6-6	0.10-0.21	0.0-2.9	1.0-6.0	.20	.28			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			
Lyman, very bouldery	0-3	0-0	---	0.2-6	0.25-0.65	---	35-80	---	---	1	8	---
	3-6	2-20	0.75-1.20	2-6	0.13-0.24	0.0-2.9	1.0-6.0	.20	.28			
	6-17	2-20	0.90-1.40	2-6	0.08-0.28	0.0-2.9	---	.32	.37			
	17-25	---	---	0.0000-0.0015	---	---	---	---	---			
831F:												
Tunbridge, very bouldery-----------	0-4	2-18	0.80-1.20	0.6-6	0.11-0.21	0.0-2.9	2.0-8.0	.20	.24	2	8	0
	4-26	2-18	1.20-1.40	0.6-6	0.10-0.21	0.0-2.9	1.0-6.0	.20	.28			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			
Lyman, very bouldery	0-3	0-0	---	0.2-6	0.25-0.65	---	35-80	---	---	1	8	---
	3-6	2-20	0.75-1.20	2-6	0.13-0.24	0.0-2.9	1.0-6.0	.20	.28			
	6-17	2-20	0.90-1.40	2-6	0.08-0.28	0.0-2.9	---	.32	.37			
	17-25	---	---	0.0000-0.0015	---	---	---	---	---			
861F:												
Lyman, very bouldery	0-3	0-0	---	0.2-6	0.25-0.65	---	35-80	---	---	1	8	---
	3-6	2-20	0.75-1.20	2-6	0.13-0.24	0.0-2.9	1.0-6.0	.20	.28			
	6-17	2-20	0.90-1.40	2-6	0.08-0.28	0.0-2.9	---	.32	.37			
	17-25	---	---	0.0000-0.0015	---	---	---	---	---			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
861F:												
Ricker, very bouldery-----------	0-3	0-0	---	0.2-6	0.20-0.50	---	50-100	---	---	1	7	38
	3-5	0-0	0.07-0.30	2-6	0.45-0.65	0.0-2.9	50-100	---	---			
	5-6	0-0	0.15-0.60	2-6	0.35-0.45	0.0-2.9	30-99	---	---			
	6-7	0-18	1.35-1.80	0.6-6	0.06-0.18	0.0-2.9	6.0-25	.49	.55			
	7-15	---	---	0.0000-0.0015	---	---	---	---	---			
931C:												
Mundalite, very bouldery-----------	0-1	0-0	---	0.2-6	0.20-0.60	---	35-80	---	---	3	8	86
	1-3	2-18	0.70-1.00	0.6-2	0.10-0.22	0.0-2.9	1.0-4.0	.24	---			
	3-27	2-18	0.80-1.10	0.6-2	0.13-0.45	0.0-2.9	3.0-12	.28	---			
	27-37	2-18	1.65-2.00	0.06-0.6	0.06-0.10	0.0-2.9	0.0-1.0	.20	---			
	37-72	1-16	1.65-2.00	0.06-0.6	0.03-0.09	0.0-2.9	0.0-0.0	.10	---			
Rawsonville, very bouldery-----------	0-1	0-0	---	0.2-6	0.20-0.60	---	35-80	---	---	2	8	0
	1-3	2-18	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	2.0-10	.43	.49			
	3-4	2-18	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	1.0-5.0	.43	.49			
	4-22	2-18	0.70-1.00	0.6-6	0.13-0.45	0.0-2.9	3.0-12	.64	.64			
	22-26	2-18	0.80-1.10	0.6-6	0.07-0.17	0.0-2.9	---	.28	.32			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			
Worden, very bouldery-----------	0-4	2-18	0.70-1.00	0.6-2	0.12-0.22	0.0-2.9	2.0-10	.43	.49	2	8	0
	4-21	2-18	0.80-1.10	0.6-2	0.10-0.45	0.0-2.9	2.0-12	.64	.64			
	21-72	2-18	1.70-1.90	0.06-0.6	0.11-0.18	0.0-2.9	0.0-0.0	.28	.32			
931D:												
Mundalite, very bouldery-----------	0-1	0-0	---	0.2-6	0.20-0.60	---	35-80	---	---	3	8	86
	1-3	2-18	0.70-1.00	0.6-2	0.10-0.22	0.0-2.9	1.0-4.0	.24	---			
	3-27	2-18	0.80-1.10	0.6-2	0.13-0.45	0.0-2.9	3.0-12	.28	---			
	27-37	2-18	1.65-2.00	0.06-0.6	0.06-0.10	0.0-2.9	0.0-1.0	.20	---			
	37-72	1-16	1.65-2.00	0.06-0.6	0.03-0.09	0.0-2.9	0.0-0.0	.10	---			
Rawsonville, very bouldery-----------	0-1	0-0	---	0.2-6	0.20-0.60	---	35-80	---	---	2	8	0
	1-3	2-18	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	2.0-10	.43	.49			
	3-4	2-18	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	1.0-5.0	.43	.49			
	4-22	2-18	0.70-1.00	0.6-6	0.13-0.45	0.0-2.9	3.0-12	.64	.64			
	22-26	2-18	0.80-1.10	0.6-6	0.07-0.17	0.0-2.9	---	.28	.32			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
933C:												
Mundalite, very bouldery-----------	0-1	0-0	---	0.2-6	0.20-0.60	---	35-80	---	---	3	8	86
	1-3	2-18	0.70-1.00	0.6-2	0.10-0.22	0.0-2.9	1.0-4.0	.24	---			
	3-27	2-18	0.80-1.10	0.6-2	0.13-0.45	0.0-2.9	3.0-12	.28	---			
	27-37	2-18	1.65-2.00	0.06-0.6	0.06-0.10	0.0-2.9	0.0-1.0	.20	---			
	37-72	1-16	1.65-2.00	0.06-0.6	0.03-0.09	0.0-2.9	0.0-0.0	.10	---			
Worden, very bouldery-----------	0-4	2-18	0.70-1.00	0.6-2	0.12-0.22	0.0-2.9	2.0-10	.43	.49	2	8	0
	4-21	2-18	0.80-1.10	0.6-2	0.10-0.45	0.0-2.9	2.0-12	.64	.64			
	21-72	2-18	1.70-1.90	0.06-0.6	0.11-0.18	0.0-2.9	0.0-0.0	.28	.32			
941C:												
Rawsonville, very bouldery-----------	0-1	0-0	---	0.2-6	0.20-0.60	---	35-80	---	---	2	8	0
	1-3	2-18	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	2.0-10	.43	.49			
	3-4	2-18	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	1.0-5.0	.43	.49			
	4-22	2-18	0.70-1.00	0.6-6	0.13-0.45	0.0-2.9	3.0-12	.64	.64			
	22-26	2-18	0.80-1.10	0.6-6	0.07-0.17	0.0-2.9	---	.28	.32			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			
Hogback, very bouldery-----------	0-1	2-18	0.60-1.00	2-6	0.13-0.22	0.0-2.9	2.0-10	.43	.49	1	8	0
	1-6	2-18	0.60-1.00	2-6	0.13-0.22	0.0-2.9	1.0-6.0	.43	.49			
	6-14	2-18	0.60-1.00	2-6	0.13-0.45	0.0-2.9	3.0-14	.64	.64			
	14-22	---	---	0.0000-0.0015	---	---	---	---	---			
941D:												
Rawsonville, very bouldery-----------	0-1	0-0	---	0.2-6	0.20-0.60	---	35-80	---	---	2	8	0
	1-3	2-18	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	2.0-10	.43	.49			
	3-4	2-18	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	1.0-5.0	.43	.49			
	4-22	2-18	0.70-1.00	0.6-6	0.13-0.45	0.0-2.9	3.0-12	.64	.64			
	22-26	2-18	0.80-1.10	0.6-6	0.07-0.17	0.0-2.9	---	.28	.32			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			
Hogback, very bouldery-----------	0-1	2-18	0.60-1.00	2-6	0.13-0.22	0.0-2.9	2.0-10	.43	.49	1	8	0
	1-6	2-18	0.60-1.00	2-6	0.13-0.22	0.0-2.9	1.0-6.0	.43	.49			
	6-14	2-18	0.60-1.00	2-6	0.13-0.45	0.0-2.9	3.0-14	.64	.64			
	14-22	---	---	0.0000-0.0015	---	---	---	---	---			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodibility group	Wind erodibility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
941F:												
Rawsonville, very bouldery-----------	0-1	0-0	---	0.2-6	0.20-0.60	---	35-80	---	---	2	8	0
	1-3	2-18	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	2.0-10	.43	.49			
	3-4	2-18	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	1.0-5.0	.43	.49			
	4-22	2-18	0.70-1.00	0.6-6	0.13-0.45	0.0-2.9	3.0-12	.64	.64			
	22-26	2-18	0.80-1.10	0.6-6	0.07-0.17	0.0-2.9	---	.28	.32			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			
Hogback, very bouldery-----------	0-1	2-18	0.60-1.00	2-6	0.13-0.22	0.0-2.9	2.0-10	.43	.49	1	8	0
	1-6	2-18	0.60-1.00	2-6	0.13-0.22	0.0-2.9	1.0-6.0	.43	.49			
	6-14	2-18	0.60-1.00	2-6	0.13-0.45	0.0-2.9	3.0-14	.64	.64			
	14-22	---	---	0.0000-0.0015	---	---	---	---	---			
943C:												
Rawsonville, very bouldery-----------	0-1	0-0	---	0.2-6	0.20-0.60	---	35-80	---	---	2	8	0
	1-3	2-18	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	2.0-10	.43	.49			
	3-4	2-18	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	1.0-5.0	.43	.49			
	4-22	2-18	0.70-1.00	0.6-6	0.13-0.45	0.0-2.9	3.0-12	.64	.64			
	22-26	2-18	0.80-1.10	0.6-6	0.07-0.17	0.0-2.9	---	.28	.32			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			
Borosaprists--------	0-7	0-0	0.30-0.60	0.2-6	0.35-0.45	0.0-2.9	50-100	---	---	3	2	134
	7-30	0-0	0.30-0.60	0.2-6	0.35-0.45	0.0-2.9	50-100	---	---			
	30-72	3-45	1.55-1.95	0.2-20	0.11-0.18	3.0-5.9	0.0-0.5	.28	.37			
Ricker, very bouldery-----------	0-3	0-0	---	0.2-6	0.20-0.50	---	50-100	---	---	1	7	38
	3-5	0-0	0.07-0.30	2-6	0.45-0.65	0.0-2.9	50-100	---	---			
	5-6	0-0	0.15-0.60	2-6	0.35-0.45	0.0-2.9	30-99	---	---			
	6-7	0-18	1.35-1.80	0.6-6	0.06-0.18	0.0-2.9	6.0-25	.49	.55			
	7-15	---	---	0.0000-0.0015	---	---	---	---	---			
945F:												
Hogback, very bouldery-----------	0-1	2-18	0.60-1.00	2-6	0.13-0.22	0.0-2.9	2.0-10	.43	.49	1	8	0
	1-6	2-18	0.60-1.00	2-6	0.13-0.22	0.0-2.9	1.0-6.0	.43	.49			
	6-14	2-18	0.60-1.00	2-6	0.13-0.45	0.0-2.9	3.0-14	.64	.64			
	14-22	---	---	0.0000-0.0015	---	---	---	---	---			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
945F:												
Ricker, very bouldery-----------	0-3	0-0	---	0.2-6	0.20-0.50	---	50-100	---	---	1	7	38
	3-5	0-0	0.07-0.30	2-6	0.45-0.65	0.0-2.9	50-100	---	---			
	5-6	0-0	0.15-0.60	2-6	0.35-0.45	0.0-2.9	30-99	---	---			
	6-7	0-18	1.35-1.80	0.6-6	0.06-0.18	0.0-2.9	6.0-25	.49	.55			
	7-15	---	---	0.0000-0.0015	---	---	---	---	---			
949F:												
Rock outcrop---------	0-72	---	---	0.0000-0.0015	---	---	---	---	---	-	8	0
Ricker, very bouldery-----------	0-3	0-0	---	0.2-6	0.20-0.50	---	50-100	---	---	1	7	38
	3-5	0-0	0.07-0.30	2-6	0.45-0.65	0.0-2.9	50-100	---	---			
	5-6	0-0	0.15-0.60	2-6	0.35-0.45	0.0-2.9	30-99	---	---			
	6-7	0-18	1.35-1.80	0.6-6	0.06-0.18	0.0-2.9	6.0-25	.49	.55			
	7-15	---	---	0.0000-0.0015	---	---	---	---	---			
Hogback, very bouldery-----------	0-1	2-18	0.60-1.00	2-6	0.13-0.22	0.0-2.9	2.0-10	.43	.49	1	8	0
	1-6	2-18	0.60-1.00	2-6	0.13-0.22	0.0-2.9	1.0-6.0	.43	.49			
	6-14	2-18	0.60-1.00	2-6	0.13-0.45	0.0-2.9	3.0-14	.64	.64			
	14-22	---	---	0.0000-0.0015	---	---	---	---	---			
991D:												
Glebe, very bouldery	0-1	0-0	---	0.2-6	0.20-0.60	---	35-80	---	---	2	8	0
	1-12	2-16	0.80-1.00	2-6	0.16-0.23	0.0-2.9	8.0-20	.43	.49			
	12-24	2-12	0.60-1.00	2-6	0.35-0.45	0.0-2.9	3.0-14	.64	.64			
	24-32	---	---	0.0000-0.0015	---	---	---	---	---			
Skylight, very bouldery-----------	0-2	0-0	---	0.2-6	0.20-0.60	---	35-95	---	---	1	2	134
	2-5	0-0	---	0.2-6	0.40-0.65	---	35-95	---	---			
	5-9	2-10	0.70-1.30	2-6	0.05-0.10	0.0-2.9	2.0-15	.17	---			
	9-15	0-10	0.50-1.10	2-6	0.15-0.30	0.0-2.9	6.0-20	.17	---			
	15-23	---	---	0.0000-0.0015	0.00-0.00	---	---	---	---			
997F:												
Ricker, very bouldery-----------	0-3	0-0	---	0.2-6	0.20-0.50	---	50-100	---	---	1	7	38
	3-5	0-0	0.07-0.30	2-6	0.45-0.65	0.0-2.9	50-100	---	---			
	5-6	0-0	0.15-0.60	2-6	0.35-0.45	0.0-2.9	30-99	---	---			
	6-7	0-18	1.35-1.80	0.6-6	0.06-0.18	0.0-2.9	6.0-25	.49	.55			
	7-15	---	---	0.0000-0.0015	---	---	---	---	---			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
997F:												
Skylight, very bouldery-----------	0-2	0-0	---	0.2-6	0.20-0.60	---	35-95	---	---	1	2	134
	2-5	0-0	---	0.2-6	0.40-0.65	---	35-95	---	---			
	5-9	2-10	0.70-1.30	2-6	0.05-0.10	0.0-2.9	2.0-15	.17	---			
	9-15	0-10	0.50-1.10	2-6	0.15-0.30	0.0-2.9	6.0-20	.17	---			
	15-23	---	---	0.0000-0.0015	0.00-0.00	---	---	---	---			
Rock Outcrop--------	0-72	---	---	0.0000-0.0015	---	---	---	---	---	-	8	0
AbA:												
Adams---------------	0-7	2-10	1.00-1.30	6-20	0.06-0.12	0.0-2.9	2.0-6.0	.17	.17	5	2	134
	7-9	2-15	1.00-1.30	6-20	0.08-0.16	0.0-2.9	1.0-3.0	.17	.17			
	9-27	0-5	1.10-1.45	6-20	0.03-0.10	0.0-2.9	1.0-3.0	.17	.17			
	27-72	0-5	1.20-1.50	20-101	0.03-0.04	0.0-2.9	0.0-0.5	.17	.17			
AbB:												
Adams---------------	0-7	2-10	1.00-1.30	6-20	0.06-0.12	0.0-2.9	2.0-6.0	.17	.17	5	2	134
	7-9	2-15	1.00-1.30	6-20	0.08-0.16	0.0-2.9	1.0-3.0	.17	.17			
	9-27	0-5	1.10-1.45	6-20	0.03-0.10	0.0-2.9	1.0-3.0	.17	.17			
	27-72	0-5	1.20-1.50	20-101	0.03-0.04	0.0-2.9	0.0-0.5	.17	.17			
AbC:												
Adams---------------	0-7	2-10	1.00-1.30	6-20	0.06-0.12	0.0-2.9	2.0-6.0	.17	.17	5	2	134
	7-9	2-15	1.00-1.30	6-20	0.08-0.16	0.0-2.9	1.0-3.0	.17	.17			
	9-27	0-5	1.10-1.45	6-20	0.03-0.10	0.0-2.9	1.0-3.0	.17	.17			
	27-72	0-5	1.20-1.50	20-101	0.03-0.04	0.0-2.9	0.0-0.5	.17	.17			
AbD:												
Adams---------------	0-7	2-10	1.00-1.30	6-20	0.06-0.12	0.0-2.9	2.0-6.0	.17	.17	5	2	134
	7-9	2-15	1.00-1.30	6-20	0.08-0.16	0.0-2.9	1.0-3.0	.17	.17			
	9-27	0-5	1.10-1.45	6-20	0.03-0.10	0.0-2.9	1.0-3.0	.17	.17			
	27-72	0-5	1.20-1.50	20-101	0.03-0.04	0.0-2.9	0.0-0.5	.17	.17			
AgB:												
Adirondack----------	0-5	2-20	1.00-1.30	0.6-2	0.15-0.21	0.0-2.9	2.0-8.0	.32	.43	3	5	56
	5-22	2-18	1.20-1.50	0.6-2	0.14-0.20	0.0-2.9	0.0-1.0	.24	.28			
	22-72	2-16	1.70-2.00	0.06-0.2	0.04-0.10	0.0-2.9	0.0-1.0	.20	.24			
AhB:												
Adirondack, very bouldery-----------	0-5	2-20	1.00-1.30	0.6-2	0.15-0.21	0.0-2.9	2.0-10	.20	.24	3	8	0
	5-22	2-18	1.20-1.50	0.6-2	0.14-0.20	0.0-2.9	0.0-1.0	.20	.24			
	22-72	2-16	1.70-2.00	0.06-0.2	0.04-0.10	0.0-2.9	0.0-1.0	.20	.24			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
Ak:												
Adjidaumo-----------	0-7	40-55	1.00-1.25	0.2-0.6	0.14-0.18	3.0-5.9	4.0-10	.37	.37	5	4	86
	7-36	27-60	1.20-1.40	0.06-0.2	0.12-0.14	3.0-5.9	1.0-4.0	.28	.28			
	36-72	27-65	1.20-1.40	0.0015-0.2	0.12-0.14	3.0-5.9	0.5-2.0	.28	.28			
Am:												
Adjidaumo, mucky silty clay---------	0-7	40-55	0.60-1.10	0.2-0.6	0.15-0.20	3.0-5.9	6.0-25	.37	.37	5	4	86
	7-36	27-60	1.20-1.40	0.06-0.2	0.12-0.14	3.0-5.9	---	.28	.28			
	36-72	27-65	1.20-1.40	0.0015-0.2	0.12-0.14	3.0-5.9	---	.28	.28			
AtA:												
Amenia--------------	0-9	4-18	1.10-1.40	0.6-2	0.13-0.20	0.0-2.9	2.0-6.0	.32	.32	3	5	56
	9-28	4-18	1.30-1.60	0.6-2	0.08-0.19	0.0-2.9	---	.24	.28			
	28-36	4-18	1.30-1.60	0.06-0.2	0.08-0.16	0.0-2.9	---	.24	.28			
	36-72	4-18	1.70-1.95	0.06-0.2	0.08-0.12	0.0-2.9	---	.24	.28			
AtB:												
Amenia--------------	0-9	4-18	1.10-1.40	0.6-2	0.13-0.20	0.0-2.9	2.0-6.0	.32	.32	3	5	56
	9-28	4-18	1.30-1.60	0.6-2	0.08-0.19	0.0-2.9	---	.24	.28			
	28-36	4-18	1.30-1.60	0.06-0.2	0.08-0.16	0.0-2.9	---	.24	.28			
	36-72	4-18	1.70-1.95	0.06-0.2	0.08-0.12	0.0-2.9	---	.24	.28			
AwA:												
Appleton------------	0-10	15-27	1.10-1.40	0.6-2	0.12-0.20	0.0-2.9	2.0-8.0	.32	.32	2	5	56
	10-18	7-27	1.20-1.50	0.06-0.6	0.07-0.18	0.0-2.9	1.0-3.0	.37	.43			
	18-30	18-27	1.60-1.85	0.06-0.6	0.07-0.18	0.0-2.9	0.0-2.0	.37	.43			
	30-72	10-27	1.70-1.95	0.06-0.6	0.07-0.17	0.0-2.9	0.0-0.0	.24	.28			
AwB:												
Appleton------------	0-10	15-27	1.10-1.40	0.6-2	0.12-0.20	0.0-2.9	2.0-8.0	.32	.32	2	5	56
	10-18	7-27	1.20-1.50	0.06-0.6	0.07-0.18	0.0-2.9	1.0-3.0	.37	.43			
	18-30	18-27	1.60-1.85	0.06-0.6	0.07-0.18	0.0-2.9	0.0-2.0	.37	.43			
	30-72	10-27	1.70-1.95	0.06-0.6	0.07-0.17	0.0-2.9	0.0-0.0	.24	.28			
BcB:												
Becket--------------	0-4	2-20	0.60-1.20	0.6-2	0.10-0.23	0.0-2.9	2.0-6.0	.20	.20	5	3	86
	4-23	2-18	1.30-1.60	0.6-2	0.06-0.16	0.0-2.9	---	.28	.32			
	23-72	2-18	1.60-1.75	0.06-0.6	0.03-0.09	0.0-2.9	---	.17	.24			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
BeC:												
Becket, very bouldery-----------	0-4	2-20	0.60-1.20	0.6-2	0.10-0.23	0.0-2.9	2.0-6.0	.20	.20	5	3	86
	4-23	2-18	1.30-1.60	0.6-2	0.06-0.16	0.0-2.9	---	.28	.32			
	23-72	2-18	1.60-1.75	0.06-0.6	0.03-0.09	0.0-2.9	---	.17	.24			
BeD:												
Becket, very bouldery-----------	0-4	2-20	0.60-1.20	0.6-2	0.10-0.23	0.0-2.9	2.0-6.0	.20	.20	5	3	86
	4-23	2-18	1.30-1.60	0.6-2	0.06-0.16	0.0-2.9	---	.28	.32			
	23-72	2-18	1.60-1.75	0.06-0.6	0.03-0.09	0.0-2.9	---	.17	.24			
BgC:												
Becket, very bouldery-----------	0-4	2-20	0.60-1.20	0.6-2	0.10-0.23	0.0-2.9	2.0-6.0	.20	.20	5	3	86
	4-23	2-18	1.30-1.60	0.6-2	0.06-0.16	0.0-2.9	---	.28	.32			
	23-72	2-18	1.60-1.75	0.06-0.6	0.03-0.09	0.0-2.9	---	.17	.24			
Tunbridge, very bouldery-----------	0-4	2-18	0.80-1.20	0.6-6	0.11-0.21	0.0-2.9	2.0-8.0	.20	.24	2	8	0
	4-26	2-18	1.20-1.40	0.6-6	0.10-0.21	0.0-2.9	1.0-6.0	.20	.28			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			
BgE:												
Becket, very bouldery-----------	0-4	2-20	0.60-1.20	0.6-2	0.10-0.23	0.0-2.9	2.0-6.0	.20	.20	5	3	86
	4-23	2-18	1.30-1.60	0.6-2	0.06-0.16	0.0-2.9	---	.28	.32			
	23-72	2-18	1.60-1.75	0.06-0.6	0.03-0.09	0.0-2.9	---	.17	.24			
Tunbridge, very bouldery-----------	0-4	2-18	0.80-1.20	0.6-6	0.11-0.21	0.0-2.9	2.0-8.0	.20	.24	2	8	0
	4-26	2-18	1.20-1.40	0.6-6	0.10-0.21	0.0-2.9	1.0-6.0	.20	.28			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			
BhC:												
Benson--------------	0-6	10-27	1.30-1.50	0.6-2	0.17-0.21	0.0-2.9	2.0-6.0	.28	.28	1	5	56
	6-14	10-35	1.40-1.70	0.6-2	0.06-0.16	0.0-2.9	---	.17	.24			
	14-18	10-35	1.40-1.80	0.2-0.6	0.06-0.14	0.0-2.9	---	---	---			
	18-26	---	---	0.0000-20	---	---	---	---	---			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
BhE:												
Benson--------------	0-6	10-27	1.30-1.50	0.6-2	0.17-0.21	0.0-2.9	2.0-6.0	.28	.28	1	5	56
	6-14	10-35	1.40-1.70	0.6-2	0.06-0.16	0.0-2.9	---	.17	.24			
	14-18	10-35	1.40-1.80	0.2-0.6	0.06-0.14	0.0-2.9	---	---	---			
	18-26	---	---	0.0000-20	---	---	---	---	---			
Bo:												
Beseman-------------	0-2	0-0	0.10-0.20	0.6-6	0.20-0.50	---	50-100	---	---	2	5	56
	2-10	0-0	0.10-0.20	0.6-6	0.55-0.65	---	50-100	---	---			
	10-45	0-0	0.10-0.25	0.6-6	0.55-0.65	---	25-75	---	---			
	45-72	4-27	1.55-1.95	0.2-0.6	0.11-0.18	3.0-5.9	0.0-0.5	.28	.37			
BrB:												
Bice----------------	0-11	2-20	1.00-1.25	0.6-6	0.08-0.23	0.0-2.9	2.0-6.0	.24	.24	5	3	86
	11-26	2-18	1.40-1.65	0.6-6	0.05-0.20	0.0-2.9	---	.24	.28			
	26-72	2-18	1.45-1.70	0.6-6	0.05-0.16	0.0-2.9	---	.24	.28			
BrC:												
Bice----------------	0-11	2-20	1.00-1.25	0.6-6	0.08-0.23	0.0-2.9	2.0-6.0	.24	.24	5	3	86
	11-26	2-18	1.40-1.65	0.6-6	0.05-0.20	0.0-2.9	---	.24	.28			
	26-72	2-18	1.45-1.70	0.6-6	0.05-0.16	0.0-2.9	---	.24	.28			
BsC:												
Bice, very stony----	0-11	2-20	1.00-1.25	0.6-6	0.08-0.23	0.0-2.9	2.0-6.0	.24	.24	5	8	0
	11-26	2-18	1.40-1.65	0.6-6	0.05-0.20	0.0-2.9	---	.24	.28			
	26-72	2-18	1.45-1.70	0.6-6	0.05-0.16	0.0-2.9	---	.24	.28			
BvB:												
Bombay--------------	0-9	7-22	1.10-1.40	0.6-2	0.11-0.19	0.0-2.9	2.0-6.0	.32	.32	5	5	56
	9-23	7-18	1.30-1.60	0.2-2	0.09-0.19	0.0-2.9	---	.24	.28			
	23-56	7-18	1.30-1.60	0.2-2	0.09-0.19	0.0-2.9	---	.24	.28			
	56-72	7-18	1.50-1.70	0.2-0.6	0.08-0.14	0.0-2.9	---	.24	.28			
Bx:												
Bucksport-----------	0-7	0-0	0.10-0.30	0.2-6	0.20-0.50	---	50-100	---	---	3	8	0
	7-47	0-0	0.10-0.30	0.2-6	0.20-0.50	---	80-99	---	---			
	47-72	0-0	0.10-0.30	0.2-6	0.20-0.50	---	80-90	---	---			
CgA:												
Champlain-----------	0-2	0-0	---	0.2-6	---	---	35-80	---	---	5	1	310
	2-10	0-3	1.30-1.55	6-20	0.07-0.09	0.0-2.9	2.0-6.0	.15	.15			
	10-33	1-4	1.40-1.60	6-20	0.04-0.09	0.0-2.9	0.0-0.2	.15	.15			
	33-72	1-4	1.40-1.60	6-20	0.04-0.09	0.0-2.9	0.0-0.2	.15	.15			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
CgB:												
Champlain-----------	0-2	0-0	---	0.2-6	---	---	35-80	---	---	5	1	310
	2-10	0-3	1.30-1.55	6-20	0.07-0.09	0.0-2.9	2.0-6.0	.15	.15			
	10-33	1-4	1.40-1.60	6-20	0.04-0.09	0.0-2.9	0.0-0.2	.15	.15			
	33-72	1-4	1.40-1.60	6-20	0.04-0.09	0.0-2.9	0.0-0.2	.15	.15			
CgC:												
Champlain-----------	0-2	0-0	---	0.2-6	---	---	35-80	---	---	5	1	310
	2-10	0-3	1.30-1.55	6-20	0.07-0.09	0.0-2.9	2.0-6.0	.15	.15			
	10-33	1-4	1.40-1.60	6-20	0.04-0.09	0.0-2.9	0.0-0.2	.15	.15			
	33-72	1-4	1.40-1.60	6-20	0.04-0.09	0.0-2.9	0.0-0.2	.15	.15			
ChF:												
Champlain-----------	0-2	0-0	---	0.2-6	---	---	35-80	---	---	5	1	310
	2-10	0-3	1.30-1.55	6-20	0.07-0.09	0.0-2.9	2.0-6.0	.15	.15			
	10-33	1-4	1.40-1.60	6-20	0.04-0.09	0.0-2.9	0.0-0.2	.15	.15			
	33-72	1-4	1.40-1.60	6-20	0.04-0.09	0.0-2.9	0.0-0.2	.15	.15			
Adams---------------	0-7	2-10	1.00-1.30	6-20	0.06-0.12	0.0-2.9	2.0-6.0	.17	.17	5	2	134
	7-9	2-15	1.00-1.30	6-20	0.08-0.16	0.0-2.9	1.0-3.0	.17	.17			
	9-27	0-5	1.10-1.45	6-20	0.03-0.10	0.0-2.9	1.0-3.0	.17	.17			
	27-72	0-5	1.20-1.50	20-101	0.03-0.04	0.0-2.9	0.0-0.5	.17	.17			
Ck:												
Churubusco----------	0-2	0-8	0.20-0.40	0.6-6	0.45-0.55	---	50-100	---	---	1	5	134
	2-32	0-0	0.15-0.40	0.6-6	0.35-0.45	---	40-100	---	---			
	32-40	---	---	0.0000-0.0015	0.00-0.00	---	---	---	---			
ClC:												
Colosse, very stony-	0-2	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	3	8	0
	2-6	2-18	1.10-1.40	2-6	0.08-0.10	0.0-2.9	0.0-4.0	.17	.24			
	6-30	2-18	1.25-1.55	2-6	0.06-0.11	0.0-2.9	0.5-2.0	.17	.24			
	30-72	0-5	1.45-1.65	6-20	0.01-0.02	0.0-2.9	0.0-0.5	.17	.17			
Hermon, very stony--	0-6	2-18	0.85-1.20	2-20	0.07-0.15	0.0-2.9	1.0-8.0	.10	.17	5	8	0
	6-10	2-18	0.85-1.20	2-20	0.07-0.20	0.0-2.9	3.0-7.0	.10	.15			
	10-37	2-7	0.85-1.30	2-20	0.05-0.10	0.0-2.9	0.5-3.0	.10	.17			
	37-72	1-4	1.10-1.70	6-20	0.02-0.06	0.0-2.9	0.0-0.5	.10	.17			
CmB:												
Colosse-------------	0-2	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	3	8	0
	2-6	2-18	1.10-1.40	2-6	0.08-0.10	0.0-2.9	0.0-4.0	.17	.24			
	6-30	2-18	1.25-1.55	2-6	0.06-0.11	0.0-2.9	0.5-2.0	.17	.24			
	30-72	0-5	1.45-1.65	6-20	0.01-0.02	0.0-2.9	0.0-0.5	.17	.17			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
CmB:												
Trout River---------	0-1	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	5	8	0
	1-3	1-5	1.10-1.40	6-20	0.03-0.10	0.0-2.9	1.0-8.0	.15	.17			
	3-6	1-5	1.10-1.40	6-20	0.03-0.10	0.0-2.9	1.0-6.0	.15	.17			
	6-31	0-5	1.25-1.55	6-20	0.02-0.04	0.0-2.9	0.5-2.0	.15	.17			
	31-72	0-3	1.45-1.65	6-20	0.01-0.02	0.0-2.9	0.0-0.5	.15	.17			
CmC:												
Colosse-------------	0-2	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	3	8	0
	2-6	2-18	1.10-1.40	2-6	0.08-0.10	0.0-2.9	0.0-4.0	.17	.24			
	6-30	2-18	1.25-1.55	2-6	0.06-0.11	0.0-2.9	0.5-2.0	.17	.24			
	30-72	0-5	1.45-1.65	6-20	0.01-0.02	0.0-2.9	0.0-0.5	.17	.17			
Trout River---------	0-1	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	5	8	0
	1-3	1-5	1.10-1.40	6-20	0.03-0.10	0.0-2.9	1.0-8.0	.15	.17			
	3-6	1-5	1.10-1.40	6-20	0.03-0.10	0.0-2.9	1.0-6.0	.15	.17			
	6-31	0-5	1.25-1.55	6-20	0.02-0.04	0.0-2.9	0.5-2.0	.15	.17			
	31-72	0-3	1.45-1.65	6-20	0.01-0.02	0.0-2.9	0.0-0.5	.15	.17			
CnC:												
Colosse, very stony-	0-2	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	3	8	0
	2-6	2-18	1.10-1.40	2-6	0.08-0.10	0.0-2.9	0.0-4.0	.17	.24			
	6-30	2-18	1.25-1.55	2-6	0.06-0.11	0.0-2.9	0.5-2.0	.17	.24			
	30-72	0-5	1.45-1.65	6-20	0.01-0.02	0.0-2.9	0.0-0.5	.17	.17			
Trout River, very stony--------------	0-1	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	5	8	0
	1-3	1-5	1.10-1.40	6-20	0.03-0.10	0.0-2.9	1.0-8.0	.15	.17			
	3-6	1-5	1.10-1.40	6-20	0.03-0.10	0.0-2.9	1.0-6.0	.15	.17			
	6-31	0-5	1.25-1.55	6-20	0.02-0.04	0.0-2.9	0.5-2.0	.15	.17			
	31-72	0-3	1.45-1.65	6-20	0.01-0.02	0.0-2.9	0.0-0.5	.15	.17			
CnD:												
Colosse, very stony-	0-2	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	3	8	0
	2-6	2-18	1.10-1.40	2-6	0.08-0.10	0.0-2.9	0.0-4.0	.17	.24			
	6-30	2-18	1.25-1.55	2-6	0.06-0.11	0.0-2.9	0.5-2.0	.17	.24			
	30-72	0-5	1.45-1.65	6-20	0.01-0.02	0.0-2.9	0.0-0.5	.17	.17			
Trout River, very stony--------------	0-1	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	5	8	0
	1-3	1-5	1.10-1.40	6-20	0.03-0.10	0.0-2.9	1.0-8.0	.15	.17			
	3-6	1-5	1.10-1.40	6-20	0.03-0.10	0.0-2.9	1.0-6.0	.15	.17			
	6-31	0-5	1.25-1.55	6-20	0.02-0.04	0.0-2.9	0.5-2.0	.15	.17			
	31-72	0-3	1.45-1.65	6-20	0.01-0.02	0.0-2.9	0.0-0.5	.15	.17			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
CoA:												
Colton--------------	0-1	0-0	---	0.2-6	0.20-0.60	---	35-80	---	---	5	3	86
	1-3	1-5	1.10-1.40	6-20	0.03-0.12	0.0-2.9	1.0-4.0	.15	.20			
	3-22	0-5	1.25-1.55	6-20	0.02-0.05	0.0-2.9	0.0-6.0	.15	.17			
	22-72	0-3	1.45-1.65	20-101	0.01-0.02	0.0-2.9	---	.10	.17			
CoB:												
Colton--------------	0-1	0-0	---	0.2-6	0.20-0.60	---	35-80	---	---	5	3	86
	1-3	1-5	1.10-1.40	6-20	0.03-0.12	0.0-2.9	1.0-4.0	.15	.20			
	3-22	0-5	1.25-1.55	6-20	0.02-0.05	0.0-2.9	0.0-6.0	.15	.17			
	22-72	0-3	1.45-1.65	20-101	0.01-0.02	0.0-2.9	---	.10	.17			
CoC:												
Colton--------------	0-1	0-0	---	0.2-6	0.20-0.60	---	35-80	---	---	5	3	86
	1-3	1-5	1.10-1.40	6-20	0.03-0.12	0.0-2.9	1.0-4.0	.15	.20			
	3-22	0-5	1.25-1.55	6-20	0.02-0.05	0.0-2.9	0.0-6.0	.15	.17			
	22-72	0-3	1.45-1.65	20-101	0.01-0.02	0.0-2.9	---	.10	.17			
CpC:												
Colton, very stony--	0-1	0-0	---	0.2-6	0.20-0.60	---	35-80	---	---	5	8	0
	1-3	1-5	1.10-1.40	6-20	0.03-0.12	0.0-2.9	1.0-4.0	.15	.20			
	3-22	0-5	1.25-1.55	6-20	0.02-0.05	0.0-2.9	0.0-6.0	.15	.17			
	22-72	0-3	1.45-1.65	20-101	0.01-0.02	0.0-2.9	---	.10	.17			
CpE:												
Colton, very stony--	0-1	0-0	---	0.2-6	0.20-0.60	---	35-80	---	---	5	8	0
	1-3	1-5	1.10-1.40	6-20	0.03-0.12	0.0-2.9	1.0-4.0	.15	.20			
	3-22	0-5	1.25-1.55	6-20	0.02-0.05	0.0-2.9	0.0-6.0	.15	.17			
	22-72	0-3	1.45-1.65	20-101	0.01-0.02	0.0-2.9	---	.10	.17			
Crk:												
Cook----------------	0-7	4-10	1.10-1.40	2-6	0.11-0.13	0.0-2.9	6.0-25	.17	.17	3	2	134
	7-23	3-10	1.25-1.55	6-20	0.03-0.07	0.0-2.9	---	.17	.20			
	23-72	4-20	1.70-1.80	0.2-0.6	0.08-0.09	0.0-2.9	---	.24	.28			
Crr:												
Cornish-------------	0-8	7-20	0.95-1.35	0.6-2	0.20-0.45	0.0-2.9	2.0-8.0	.32	.32	5	3	86
	8-28	7-20	0.95-1.45	0.6-2	0.20-0.45	0.0-2.9	0.5-2.0	.49	.49			
	28-72	2-20	1.10-1.50	0.6-2	0.18-0.45	0.0-2.9	0.0-1.0	.49	.49			
Cs:												
Covert--------------	0-3	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	5	2	134
	3-6	2-12	1.30-1.55	6-20	0.09-0.12	0.0-2.9	2.0-8.0	.17	.17			
	6-8	2-10	1.30-1.60	6-20	0.06-0.08	0.0-2.9	0.6-4.0	.15	.15			
	8-30	2-10	1.30-1.60	6-20	0.05-0.08	0.0-2.9	0.0-0.5	.15	.15			
	30-37	2-10	1.30-1.60	6-20	0.05-0.08	0.0-2.9	0.0-0.5	.15	.15			
	37-72	0-10	1.45-1.65	6-20	0.04-0.07	0.0-2.9	0.0-0.5	.15	.15			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
CtsA:												
Covertfalls---------	0-8	1-10	1.20-1.55	6-20	0.09-0.12	0.0-2.9	2.0-6.0	.17	.17	5	2	134
	8-20	1-5	1.30-1.60	6-20	0.04-0.10	0.0-2.9	0.0-2.0	.17	.17			
	20-26	1-5	1.30-1.60	6-20	0.04-0.10	0.0-2.9	0.0-2.0	.17	.17			
	26-72	4-20	1.50-1.80	0.2-2	0.08-0.15	0.0-2.9	0.0-0.5	.20	.32			
CtsB:												
Covertfalls---------	0-8	1-10	1.20-1.55	6-20	0.09-0.12	0.0-2.9	2.0-6.0	.17	.17	5	2	134
	8-20	1-5	1.30-1.60	6-20	0.04-0.10	0.0-2.9	0.0-2.0	.17	.17			
	20-26	1-5	1.30-1.60	6-20	0.04-0.10	0.0-2.9	0.0-2.0	.17	.17			
	26-72	4-20	1.50-1.80	0.2-2	0.08-0.15	0.0-2.9	0.0-0.5	.20	.32			
CttB:												
Covertfalls, gravelly-----------	0-8	1-10	1.20-1.55	6-20	0.09-0.12	0.0-2.9	2.0-6.0	.17	.17	5	8	134
	8-20	1-5	1.30-1.60	6-20	0.04-0.10	0.0-2.9	0.0-2.0	.17	.17			
	20-26	1-5	1.30-1.60	6-20	0.04-0.10	0.0-2.9	0.0-2.0	.17	.17			
	26-72	4-20	1.50-1.80	0.2-2	0.08-0.15	0.0-2.9	0.0-0.5	.20	.32			
CvA:												
Coveytown-----------	0-8	4-10	1.10-1.40	2-20	0.04-0.08	0.0-2.9	2.0-8.0	.20	.17	5	2	134
	8-28	0-10	1.25-1.55	2-20	0.02-0.07	0.0-2.9	0.5-2.0	.17	.20			
	28-72	4-20	1.50-1.80	0.2-2	0.08-0.11	0.0-2.9	0.0-0.5	.24	.28			
CvB:												
Coveytown-----------	0-8	4-10	1.10-1.40	2-20	0.04-0.08	0.0-2.9	2.0-8.0	.20	.17	5	2	134
	8-28	0-10	1.25-1.55	2-20	0.02-0.07	0.0-2.9	0.5-2.0	.17	.20			
	28-72	4-20	1.50-1.80	0.2-2	0.08-0.11	0.0-2.9	0.0-0.5	.24	.28			
CwB:												
Coveytown, very stony--------------	0-8	4-10	1.10-1.40	2-20	0.04-0.08	0.0-2.9	2.0-8.0	.20	.17	5	8	0
	8-28	0-10	1.25-1.55	2-20	0.02-0.07	0.0-2.9	0.5-2.0	.17	.20			
	28-72	4-20	1.50-1.80	0.2-2	0.08-0.11	0.0-2.9	0.0-0.5	.24	.28			
CxA:												
Croghan-------------	0-1	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	5	2	134
	1-3	0-5	1.10-1.50	6-20	0.05-0.09	0.0-2.9	2.0-8.0	.17	.17			
	3-9	0-7	1.10-1.50	6-20	0.05-0.09	0.0-2.9	1.0-4.0	.17	.17			
	9-33	0-5	1.20-1.50	20-101	0.03-0.07	0.0-2.9	---	.17	.17			
	33-72	0-5	1.20-1.50	20-101	0.03-0.06	0.0-2.9	---	.17	.17			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Kf	T	Wind erodibility group	Wind erodibility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
CxB:												
Croghan	0-1	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	5	2	134
	1-3	0-5	1.10-1.50	6-20	0.05-0.09	0.0-2.9	2.0-8.0	.17	.17			
	3-9	0-7	1.10-1.50	6-20	0.05-0.09	0.0-2.9	1.0-4.0	.17	.17			
	9-33	0-5	1.20-1.50	20-101	0.03-0.07	0.0-2.9	---	.17	.17			
	33-72	0-5	1.20-1.50	20-101	0.03-0.06	0.0-2.9	---	.17	.17			
DeA:												
Deerfield	0-6	2-7	0.95-1.10	6-20	0.12-0.23	0.0-2.9	1.0-6.0	.24	.24	5	2	134
	6-31	1-10	1.20-1.45	6-20	0.01-0.13	0.0-2.9	---	.17	.17			
	31-72	0-5	1.40-1.50	20-101	0.01-0.08	0.0-2.9	---	.17	.17			
DeB:												
Deerfield	0-6	2-7	0.95-1.10	6-20	0.12-0.23	0.0-2.9	1.0-6.0	.24	.24	5	2	134
	6-31	1-10	1.20-1.45	6-20	0.01-0.13	0.0-2.9	---	.17	.17			
	31-72	0-5	1.40-1.50	20-101	0.01-0.08	0.0-2.9	---	.17	.17			
Df:												
Deinache	0-9	1-5	1.35-1.50	6-20	0.10-0.18	0.0-2.9	2.0-10	.15	.15	5	1	220
	9-44	1-5	1.35-1.45	6-20	0.05-0.10	0.0-2.9	0.0-2.0	.15	.15			
	44-72	1-20	1.40-1.70	0.6-6	0.12-0.20	0.0-2.9	0.0-0.5	.20	.20			
FeB:												
Fahey, loamy substratum	0-9	7-18	1.10-1.40	6-20	0.07-0.13	0.0-2.9	2.0-8.0	.17	.17	5	2	134
	9-27	2-10	1.25-1.55	6-20	0.02-0.05	0.0-2.9	1.0-3.0	.15	.17			
	27-45	0-8	1.45-1.65	6-20	0.01-0.03	0.0-2.9	0.0-1.0	.10	.17			
	45-72	4-20	1.40-1.65	0.2-2	0.07-0.14	0.0-2.9	0.0-0.5	.24	.32			
FhB:												
Fahey, very stony	0-9	7-18	1.10-1.40	6-20	0.07-0.13	0.0-2.9	2.0-8.0	.17	.17	5	8	0
	9-27	2-10	1.25-1.55	6-20	0.02-0.05	0.0-2.9	1.0-3.0	.15	.17			
	27-45	0-8	1.45-1.65	6-20	0.01-0.03	0.0-2.9	0.0-1.0	.10	.17			
	45-72	4-20	1.40-1.65	0.2-2	0.07-0.14	0.0-2.9	0.0-0.5	.24	.32			
FkB:												
Fernlake	0-1	0-0	---	0.2-6	0.20-0.50	---	35-90	---	---	5	2	134
	1-2	1-5	1.10-1.35	2-20	0.07-0.15	0.0-2.9	2.0-8.0	.10	.17			
	2-3	1-5	1.30-1.60	2-20	0.06-0.11	0.0-2.9	0.0-4.0	.10	.17			
	3-33	1-5	1.40-1.70	2-20	0.05-0.10	0.0-2.9	0.0-1.0	.10	.17			
	33-72	0-5	1.40-1.70	2-20	0.03-0.08	0.0-2.9	0.0-0.5	.10	.17			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
FlB:												
Fernlake, very bouldery-----------	0-1	0-0	---	0.2-6	0.20-0.50	---	35-90	---	---	5	8	0
	1-2	1-5	1.10-1.35	2-20	0.07-0.15	0.0-2.9	2.0-8.0	.10	.17			
	2-3	1-5	1.30-1.60	2-20	0.06-0.11	0.0-2.9	0.0-4.0	.10	.17			
	3-33	1-5	1.40-1.70	2-20	0.05-0.10	0.0-2.9	0.0-1.0	.10	.17			
	33-72	0-5	1.40-1.70	2-20	0.03-0.08	0.0-2.9	0.0-0.5	.10	.17			
FlC:												
Fernlake, very bouldery-----------	0-1	0-0	---	0.2-6	0.20-0.50	---	35-90	---	---	5	8	0
	1-2	1-5	1.10-1.35	2-20	0.07-0.15	0.0-2.9	2.0-8.0	.10	.17			
	2-3	1-5	1.30-1.60	2-20	0.06-0.11	0.0-2.9	0.0-4.0	.10	.17			
	3-33	1-5	1.40-1.70	2-20	0.05-0.10	0.0-2.9	0.0-1.0	.10	.17			
	33-72	0-5	1.40-1.70	2-20	0.03-0.08	0.0-2.9	0.0-0.5	.10	.17			
FlD:												
Fernlake, very bouldery-----------	0-1	0-0	---	0.2-6	0.20-0.50	---	35-90	---	---	5	8	0
	1-2	1-5	1.10-1.35	2-20	0.07-0.15	0.0-2.9	2.0-8.0	.10	.17			
	2-3	1-5	1.30-1.60	2-20	0.06-0.11	0.0-2.9	0.0-4.0	.10	.17			
	3-33	1-5	1.40-1.70	2-20	0.05-0.10	0.0-2.9	0.0-1.0	.10	.17			
	33-72	0-5	1.40-1.70	2-20	0.03-0.08	0.0-2.9	0.0-0.5	.10	.17			
FlF:												
Fernlake, very bouldery-----------	0-1	0-0	---	0.2-6	0.20-0.50	---	35-90	---	---	5	8	0
	1-2	1-5	1.10-1.35	2-20	0.07-0.15	0.0-2.9	2.0-8.0	.10	.17			
	2-3	1-5	1.30-1.60	2-20	0.06-0.11	0.0-2.9	0.0-4.0	.10	.17			
	3-33	1-5	1.40-1.70	2-20	0.05-0.10	0.0-2.9	0.0-1.0	.10	.17			
	33-72	0-5	1.40-1.70	2-20	0.03-0.08	0.0-2.9	0.0-0.5	.10	.17			
FmB:												
Flackville----------	0-12	2-10	1.10-1.50	6-20	0.08-0.09	0.0-2.9	2.0-6.0	.17	.17	5	1	310
	12-26	0-6	1.20-1.60	6-20	0.05-0.07	0.0-2.9	0.0-1.0	.17	.17			
	26-72	27-65	1.15-1.40	0.0015-0.2	0.12-0.17	3.0-5.9	0.0-0.5	.28	.28			
Fn:												
Fluvaquents, frequently flooded-	0-12	7-27	0.90-1.20	0.06-6	0.15-0.25	0.0-2.9	4.0-15	.32	.32	3	6	---
	12-72	7-35	1.20-1.60	0.06-20	0.03-0.16	0.0-2.9	0.0-1.0	.28	.32			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
Fn:												
Fluvaquents,												
frequently flooded-	0-12	7-27	0.90-1.20	0.06-6	0.15-0.25	0.0-2.9	4.0-9.0	.32	.32	3	6	48
	12-72	7-35	1.20-1.60	0.06-20	0.03-0.16	0.0-2.9	0.0-1.0	.28	.32			
Udifluvents,												
frequently flooded-	0-12	5-27	1.10-1.50	0.2-20	0.03-0.15	0.0-2.9	1.0-6.0	.28	.32	3	3	86
	12-72	2-35	1.20-1.70	0.06-20	0.03-0.16	0.0-2.9	---	---	---			
GfC:												
Gardenisle----------	0-5	7-27	1.10-1.40	0.6-2	0.10-0.20	0.0-2.9	2.0-6.0	.28	---	2	5	56
	5-9	7-27	1.10-1.40	0.6-2	0.09-0.17	0.0-2.9	1.0-3.0	.20	---			
	9-17	7-27	1.20-1.60	0.2-2	0.11-0.17	0.0-2.9	0.0-2.0	.20	---			
	17-24	7-27	1.40-1.70	0.2-2	0.07-0.15	0.0-2.9	0.0-0.0	.20	---			
	24-34	7-27	1.60-1.90	0.06-0.6	0.00-0.04	---	---	---	---			
	34-42	---	---	0.0000-0.6	---	---	---	---	---			
Benson--------------	0-6	10-27	1.30-1.50	0.6-2	0.17-0.21	0.0-2.9	2.0-6.0	.28	.28	1	5	56
	6-14	10-35	1.40-1.70	0.6-2	0.06-0.16	0.0-2.9	---	.17	.24			
	14-18	10-35	1.40-1.80	0.2-0.6	0.06-0.14	0.0-2.9	---	---	---			
	18-26	---	---	0.0000-20	---	---	---	---	---			
Gl:												
Gougeville,												
undrained----------	0-6	1-10	1.10-1.30	2-6	0.10-0.20	0.0-2.9	8.0-20	.20	.20	5	2	134
	6-40	1-7	1.20-1.50	2-20	0.06-0.08	0.0-2.9	0.0-2.0	.15	.15			
	40-72	1-20	1.30-1.60	2-20	0.05-0.15	0.0-2.9	0.0-0.0	.17	.17			
GrA:												
Grattan-------------	0-3	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	5	2	134
	3-5	2-10	1.35-1.55	6-20	0.10-0.12	0.0-2.9	1.0-8.0	.17	.17			
	5-41	0-10	1.40-1.60	6-20	0.05-0.10	0.0-2.9	0.0-1.0	.15	.15			
	41-72	0-7	1.50-1.65	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.15	.15			
GrB:												
Grattan-------------	0-3	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	5	2	134
	3-5	2-10	1.35-1.55	6-20	0.10-0.12	0.0-2.9	1.0-8.0	.17	.17			
	5-41	0-10	1.40-1.60	6-20	0.05-0.10	0.0-2.9	0.0-1.0	.15	.15			
	41-72	0-7	1.50-1.65	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.15	.15			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
GvB:												
Grenville-----------	0-9	4-18	1.10-1.40	0.6-2	0.16-0.20	0.0-2.9	2.0-6.0	.32	.32	3	5	56
	9-17	4-18	1.25-1.50	0.6-2	0.08-0.15	0.0-2.9	---	.24	.28			
	17-35	4-18	1.25-1.50	0.6-2	0.08-0.15	0.0-2.9	---	.24	.28			
	35-72	4-18	1.60-1.85	0.2-0.6	0.06-0.13	0.0-2.9	---	.24	.28			
GwC:												
Grenville, very stony--------------	0-9	4-18	1.10-1.40	0.6-2	0.16-0.20	0.0-2.9	2.0-6.0	.32	.32	3	8	0
	9-17	4-18	1.25-1.50	0.6-2	0.08-0.15	0.0-2.9	---	.24	.28			
	17-35	4-18	1.25-1.50	0.6-2	0.08-0.15	0.0-2.9	---	.24	.28			
	35-72	4-18	1.60-1.85	0.2-0.6	0.06-0.13	0.0-2.9	---	.24	.28			
Ha:												
Hailesboro----------	0-9	10-27	1.20-1.50	0.6-2	0.22-0.25	0.0-2.9	2.0-8.0	.49	.49	5	5	56
	9-30	18-35	1.20-1.50	0.2-0.6	0.22-0.25	0.0-2.9	---	.49	.49			
	30-72	5-35	1.20-1.50	0.2-0.6	0.12-0.20	0.0-2.9	---	.64	.64			
HeB:												
Hermon--------------	0-6	2-18	0.85-1.20	2-20	0.07-0.15	0.0-2.9	1.0-8.0	.10	.17	5	3	86
	6-10	2-18	0.85-1.20	2-20	0.07-0.20	0.0-2.9	3.0-7.0	.10	.15			
	10-37	2-7	0.85-1.30	2-20	0.05-0.10	0.0-2.9	0.5-3.0	.10	.17			
	37-72	1-4	1.10-1.70	6-20	0.02-0.06	0.0-2.9	0.0-0.5	.10	.17			
HeC:												
Hermon--------------	0-6	2-18	0.85-1.20	2-20	0.07-0.15	0.0-2.9	1.0-8.0	.10	.17	5	3	86
	6-10	2-18	0.85-1.20	2-20	0.07-0.20	0.0-2.9	3.0-7.0	.10	.15			
	10-37	2-7	0.85-1.30	2-20	0.05-0.10	0.0-2.9	0.5-3.0	.10	.17			
	37-72	1-4	1.10-1.70	6-20	0.02-0.06	0.0-2.9	0.0-0.5	.10	.17			
HfC:												
Hermon, very bouldery-----------	0-6	2-18	0.85-1.20	2-20	0.07-0.15	0.0-2.9	1.0-8.0	.10	.17	5	8	0
	6-10	2-18	0.85-1.20	2-20	0.07-0.20	0.0-2.9	3.0-7.0	.10	.15			
	10-37	2-7	0.85-1.30	2-20	0.05-0.10	0.0-2.9	0.5-3.0	.10	.17			
	37-72	1-4	1.10-1.70	6-20	0.02-0.06	0.0-2.9	0.0-0.5	.10	.17			
HfD:												
Hermon, very bouldery-----------	0-6	2-18	0.85-1.20	2-20	0.07-0.15	0.0-2.9	1.0-8.0	.10	.17	5	8	0
	6-10	2-18	0.85-1.20	2-20	0.07-0.20	0.0-2.9	3.0-7.0	.10	.15			
	10-37	2-7	0.85-1.30	2-20	0.05-0.10	0.0-2.9	0.5-3.0	.10	.17			
	37-72	1-4	1.10-1.70	6-20	0.02-0.06	0.0-2.9	0.0-0.5	.10	.17			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
HgC:												
Hermon, very bouldery-----------	0-6	2-18	0.85-1.20	2-20	0.07-0.15	0.0-2.9	1.0-8.0	.10	.17	5	8	0
	6-10	2-18	0.85-1.20	2-20	0.07-0.20	0.0-2.9	3.0-7.0	.10	.15			
	10-37	2-7	0.85-1.30	2-20	0.05-0.10	0.0-2.9	0.5-3.0	.10	.17			
	37-72	1-4	1.10-1.70	6-20	0.02-0.06	0.0-2.9	0.0-0.5	.10	.17			
Adirondack, very bouldery-----------	0-5	2-20	1.00-1.30	0.6-2	0.15-0.21	0.0-2.9	2.0-10	.20	.24	3	8	0
	5-22	2-18	1.20-1.50	0.6-2	0.14-0.20	0.0-2.9	0.0-1.0	.20	.24			
	22-72	2-16	1.70-2.00	0.06-0.2	0.04-0.10	0.0-2.9	0.0-1.0	.20	.24			
HlB:												
Heuvelton-----------	0-6	27-40	1.00-1.25	0.2-2	0.16-0.21	3.0-5.9	2.0-6.0	.37	.37	5	6	48
	6-10	27-60	1.15-1.40	0.2-2	0.13-0.17	3.0-5.9	---	.28	.28			
	10-39	27-65	1.15-1.40	0.2-2	0.13-0.17	3.0-5.9	---	.28	.28			
	39-72	27-65	1.15-1.65	0.0015-0.2	0.13-0.17	3.0-5.9	---	.28	.28			
HlD:												
Heuvelton-----------	0-6	27-40	1.00-1.25	0.2-2	0.16-0.21	3.0-5.9	1.0-6.0	.37	.37	5	6	48
	6-10	27-60	1.15-1.40	0.2-2	0.13-0.17	3.0-5.9	---	.28	.28			
	10-39	27-65	1.15-1.40	0.2-2	0.13-0.17	3.0-5.9	---	.28	.28			
	39-72	27-65	1.15-1.65	0.0015-0.2	0.13-0.17	3.0-5.9	---	.28	.28			
HoA:												
Hogansburg----------	0-10	4-18	1.10-1.40	0.6-2	0.16-0.20	0.0-2.9	2.0-6.0	.32	.32	3	5	56
	10-19	4-18	1.25-1.50	0.6-2	0.08-0.15	0.0-2.9	---	.24	.28			
	19-35	4-18	1.25-1.50	0.6-2	0.08-0.15	0.0-2.9	---	.24	.28			
	35-72	4-18	1.70-1.95	0.2-0.6	0.06-0.13	0.0-2.9	---	.24	.28			
HoB:												
Hogansburg----------	0-10	4-18	1.10-1.40	0.6-2	0.16-0.20	0.0-2.9	2.0-6.0	.32	.32	3	5	56
	10-19	4-18	1.25-1.50	0.6-2	0.08-0.15	0.0-2.9	---	.24	.28			
	19-35	4-18	1.25-1.50	0.6-2	0.08-0.15	0.0-2.9	---	.24	.28			
	35-72	4-18	1.70-1.95	0.2-0.6	0.06-0.13	0.0-2.9	---	.24	.28			
HrB:												
Hogansburg, very stony--------------	0-10	4-18	1.10-1.40	0.6-2	0.16-0.20	0.0-2.9	2.0-6.0	.32	.32	3	8	0
	10-19	4-18	1.25-1.50	0.6-2	0.08-0.15	0.0-2.9	---	.24	.28			
	19-35	4-18	1.25-1.50	0.6-2	0.08-0.15	0.0-2.9	---	.24	.28			
	35-72	4-18	1.70-1.95	0.2-0.6	0.06-0.13	0.0-2.9	---	.24	.28			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
InB:												
Irona---------------	0-5	2-20	1.10-1.40	0.6-2	0.10-0.18	0.0-2.9	2.0-6.0	.24	.24	1	5	56
	5-13	2-18	1.20-1.50	0.6-2	0.08-0.14	0.0-2.9	0.0-1.0	.24	.28			
	13-18	2-18	1.30-1.70	0.6-2	0.07-0.13	0.0-2.9	0.0-0.5	.24	.28			
	18-26	---	---	0.0000-0.0015	---	---	---	---	---			
Conic---------------	0-1	0-0	---	0.2-6	0.25-0.65	---	35-80	---	---	2	5	56
	1-4	2-20	1.20-1.50	0.6-2	0.11-0.17	---	1.0-4.0	---	---			
	4-23	2-18	1.50-1.60	0.6-2	0.12-0.17	0.0-2.9	0.0-3.0	.32	.32			
	23-37	2-18	1.70-2.00	0.06-0.2	0.05-0.09	0.0-2.9	0.0-0.5	.15	.24			
	37-45	---	---	0.0000-0.0015	---	---	---	---	---			
Jn:												
Junius--------------	0-9	1-5	1.20-1.50	2-6	0.06-0.16	0.0-2.9	2.0-8.0	.17	.17	5	2	134
	9-46	0-5	1.20-1.50	6-20	0.04-0.08	0.0-2.9	---	.17	.17			
	46-72	0-10	1.45-1.65	6-20	0.04-0.08	0.0-2.9	---	.17	.17			
KhB:												
Kalurah-------------	0-8	4-18	1.10-1.40	0.6-2	0.16-0.20	0.0-2.9	2.0-6.0	.32	.32	4	5	56
	8-45	4-18	1.20-1.50	0.2-0.6	0.08-0.15	0.0-2.9	---	.28	.32			
	45-72	4-18	1.60-1.85	0.06-0.2	0.08-0.15	0.0-2.9	---	.24	.28			
KlB:												
Kalurah, very stony-	0-8	4-18	1.10-1.40	0.6-2	0.16-0.20	0.0-2.9	2.0-6.0	.32	.32	4	8	0
	8-45	4-18	1.20-1.50	0.2-0.6	0.08-0.15	0.0-2.9	---	.28	.32			
	45-72	4-18	1.60-1.85	0.06-0.2	0.08-0.15	0.0-2.9	---	.24	.28			
Kr:												
Kingsbury-----------	0-8	27-40	1.10-1.25	0.06-0.2	0.12-0.22	3.0-5.9	2.0-9.0	.49	.49	3	4	86
	8-11	25-50	1.30-1.50	0.0015-0.06	0.12-0.20	---	1.0-4.0	---	---			
	11-32	60-90	1.40-1.60	0.0015-0.06	0.12-0.13	6.0-8.9	0.0-1.0	.28	.28			
	32-72	35-90	1.40-1.50	0.0015-0.06	0.12-0.14	6.0-8.9	0.0-1.0	.28	.28			
Rhinebeck-----------	0-8	27-40	1.00-1.25	0.2-0.6	0.16-0.21	3.0-5.9	2.0-9.0	.49	.49	3	6	48
	8-31	35-60	1.20-1.40	0.06-0.2	0.12-0.14	3.0-5.9	1.0-3.0	.28	.28			
	31-51	35-60	1.15-1.40	0.06-0.2	0.12-0.14	3.0-5.9	0.0-1.0	.28	.28			
	51-72	10-60	1.45-1.65	0.06-0.2	0.12-0.15	0.0-2.9	0.0-1.0	.28	.28			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
Ld:												
Lovewell, stratified substratum---------	0-11	7-20	0.95-1.35	0.6-2	0.20-0.35	0.0-2.9	2.0-8.0	.32	.32	5	3	86
	11-30	7-20	0.95-1.40	0.6-2	0.20-0.45	0.0-2.9	0.5-2.0	.49	.49			
	30-50	5-18	1.10-1.50	0.6-2	0.18-0.40	0.0-2.9	0.0-1.0	.49	.49			
	50-75	0-18	1.30-1.50	6-20	0.04-0.08	0.0-2.9	0.0-0.5	.20	---			
Le:												
Loxley--------------	0-16	0-0	0.30-0.40	0.6-6	0.45-0.55	---	70-100	---	---	3	5	56
	16-72	0-0	0.10-0.35	0.2-6	0.35-0.45	---	70-99	---	---			
LtF:												
Lyman, very bouldery	0-3	0-0	---	0.2-6	0.25-0.65	---	35-80	---	---	1	---	---
	3-6	2-20	0.75-1.20	2-6	0.13-0.24	0.0-2.9	1.0-6.0	.20	.28			
	6-17	2-20	0.90-1.40	2-6	0.08-0.28	0.0-2.9	---	.32	.37			
	17-25	---	---	0.0000-0.0015	---	---	---	---	---			
Tunbridge, very bouldery-----------	0-4	2-18	0.80-1.20	0.6-6	0.11-0.21	0.0-2.9	2.0-8.0	.20	.24	2	8	0
	4-26	2-18	1.20-1.40	0.6-6	0.10-0.21	0.0-2.9	1.0-6.0	.20	.28			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			
Rock Outcrop--------	0-60	---	---	0.06-6	---	---	---	---	---	-	8	0
Lv:												
Lyonmounten, undrained----------	0-9	2-20	1.10-1.40	0.6-2	0.14-0.20	0.0-2.9	2.0-9.0	.28	.28	5	5	56
	9-41	2-20	1.30-1.60	0.2-2	0.10-0.20	0.0-2.9	0.0-2.0	.20	.28			
	41-72	2-20	1.45-1.65	0.2-2	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24			
Ly:												
Lyonmounten, very stony--------------	0-9	2-20	1.10-1.40	0.6-2	0.14-0.20	0.0-2.9	2.0-9.0	.28	.28	5	8	56
	9-41	2-20	1.30-1.60	0.2-2	0.10-0.20	0.0-2.9	0.0-2.0	.20	.28			
	41-72	2-20	1.45-1.65	0.2-2	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24			
MaB:												
Madrid--------------	0-6	4-22	1.10-1.40	0.6-2	0.11-0.19	0.0-2.9	2.0-6.0	.32	.32	5	5	56
	6-28	4-18	1.30-1.60	0.6-2	0.09-0.19	0.0-2.9	---	.24	.28			
	28-42	4-22	1.30-1.60	0.2-2	0.09-0.19	0.0-2.9	---	.24	.28			
	42-72	4-20	1.50-1.70	0.2-0.6	0.08-0.14	0.0-2.9	---	.24	.28			
MaC:												
Madrid--------------	0-6	4-22	1.10-1.40	0.6-2	0.11-0.19	0.0-2.9	2.0-6.0	.32	.32	5	5	56
	6-28	4-18	1.30-1.60	0.6-2	0.09-0.19	0.0-2.9	---	.24	.28			
	28-42	4-22	1.30-1.60	0.2-2	0.09-0.19	0.0-2.9	---	.24	.28			
	42-72	4-20	1.50-1.70	0.2-0.6	0.08-0.14	0.0-2.9	---	.24	.28			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
MeA:												
Malone--------------	0-9	4-22	1.10-1.40	0.6-2	0.09-0.16	0.0-2.9	2.0-8.0	.20	.28	3	5	56
	9-30	4-18	1.20-1.50	0.06-0.6	0.08-0.15	0.0-2.9	---	.20	.24			
	30-72	4-18	1.70-1.90	0.06-0.6	0.06-0.14	0.0-2.9	---	.20	.24			
MeB:												
Malone--------------	0-9	4-22	1.10-1.40	0.6-2	0.09-0.16	0.0-2.9	2.0-8.0	.20	.28	3	5	56
	9-30	4-18	1.20-1.50	0.06-0.6	0.08-0.15	0.0-2.9	---	.20	.24			
	30-72	4-18	1.70-1.90	0.06-0.6	0.06-0.14	0.0-2.9	---	.20	.24			
MfB:												
Malone, very stony--	0-9	4-22	1.10-1.40	0.6-2	0.09-0.16	0.0-2.9	2.0-8.0	.20	.28	3	8	0
	9-30	4-18	1.20-1.50	0.06-0.6	0.08-0.15	0.0-2.9	---	.20	.24			
	30-72	4-18	1.70-1.90	0.06-0.6	0.06-0.14	0.0-2.9	---	.20	.24			
Mk:												
Markey--------------	0-27	0-0	0.30-0.55	0.2-6	0.35-0.45	---	50-100	---	---	2	2	134
	27-72	0-10	1.40-1.75	6-20	0.03-0.08	0.0-2.9	---	.15	.15			
Mn:												
Massena-------------	0-9	4-22	1.10-1.40	0.6-2	0.08-0.15	0.0-2.9	2.0-8.0	.20	.24	3	3	86
	9-32	4-18	1.20-1.50	0.06-0.6	0.08-0.15	0.0-2.9	---	.20	.24			
	32-72	4-18	1.70-1.95	0.06-0.6	0.06-0.14	0.0-2.9	---	.20	.24			
Mp:												
Medomak, stratified substratum---------	0-1	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	5	8	0
	1-13	7-22	0.90-1.20	0.6-2	0.20-0.30	0.0-2.9	2.0-10	.32	.28			
	13-26	7-20	1.10-1.35	0.6-2	0.20-0.30	0.0-2.9	0.5-2.0	.49	.49			
	26-47	4-20	1.30-1.50	0.6-2	0.20-0.30	0.0-2.9	0.5-2.0	.49	.49			
	47-72	0-18	1.30-1.50	2-20	0.01-0.06	0.0-2.9	0.0-0.5	.20	---			
Ms:												
Mino----------------	0-9	4-18	1.20-1.50	0.6-2	0.16-0.20	0.0-2.9	2.0-8.0	.28	.28	5	3	86
	9-24	4-18	1.20-1.50	0.6-2	0.13-0.20	0.0-2.9	---	.28	.28			
	24-78	4-18	1.20-1.50	0.6-2	0.13-0.20	0.0-2.9	---	.28	.28			
MtB:												
Monadnock-----------	0-2	2-18	0.80-1.20	0.6-2	0.12-0.21	0.0-2.9	1.0-6.0	.28	.28	3	3	86
	2-36	2-18	0.80-1.30	0.6-2	0.09-0.17	0.0-2.9	---	.28	.28			
	36-72	2-8	1.30-1.60	2-6	0.04-0.08	0.0-2.9	---	.17	.20			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
MtC:												
Monadnock-----------	0-2	2-18	0.80-1.20	0.6-2	0.15-0.21	0.0-2.9	1.0-6.0	.28	.28	3	3	86
	2-36	2-18	0.80-1.30	0.6-2	0.09-0.17	0.0-2.9	---	.28	.28			
	36-72	2-8	1.30-1.60	2-6	0.04-0.08	0.0-2.9	---	.17	.20			
MuC:												
Monadnock, very bouldery-----------	0-2	2-18	0.80-1.20	0.6-2	0.15-0.21	0.0-2.9	1.0-6.0	.28	.28	3	8	86
	2-36	2-18	0.80-1.30	0.6-2	0.09-0.17	0.0-2.9	---	.28	.28			
	36-72	2-8	1.30-1.60	2-6	0.04-0.08	0.0-2.9	---	.17	.20			
MuD:												
Monadnock, very bouldery-----------	0-2	2-18	0.80-1.20	0.6-2	0.15-0.21	0.0-2.9	1.0-6.0	.28	.28	3	8	86
	2-36	2-18	0.80-1.30	0.6-2	0.09-0.17	0.0-2.9	---	.28	.28			
	36-72	2-8	1.30-1.60	2-6	0.04-0.08	0.0-2.9	---	.17	.20			
MuF:												
Monadnock, very bouldery-----------	0-2	2-18	0.80-1.20	0.6-2	0.15-0.21	0.0-2.9	1.0-6.0	.28	.28	3	8	86
	2-36	2-18	0.80-1.30	0.6-2	0.09-0.17	0.0-2.9	---	.28	.28			
	36-72	2-8	1.30-1.60	2-6	0.04-0.08	0.0-2.9	---	.17	.20			
MvA:												
Mooers--------------	0-8	1-10	1.30-1.55	6-20	0.06-0.11	0.0-2.9	2.0-6.0	.17	.17	5	2	134
	8-47	1-10	1.30-1.60	6-20	0.04-0.11	0.0-2.9	0.0-0.5	.15	.15			
	47-72	1-18	1.30-1.50	2-20	0.05-0.12	0.0-2.9	0.0-0.2	.15	.15			
MvB:												
Mooers--------------	0-8	1-10	1.30-1.55	6-20	0.06-0.11	0.0-2.9	2.0-6.0	.17	.17	5	2	134
	8-47	1-10	1.30-1.60	6-20	0.04-0.11	0.0-2.9	0.0-0.5	.15	.15			
	47-72	1-18	1.30-1.50	2-20	0.05-0.12	0.0-2.9	0.0-0.2	.15	.15			
MwA:												
Muskellunge---------	0-9	27-40	1.00-1.25	0.2-0.6	0.16-0.21	3.0-5.9	2.0-9.0	.49	.49	5	6	48
	9-38	27-65	1.20-1.40	0.06-0.2	0.12-0.14	3.0-5.9	---	.28	.28			
	38-72	40-65	1.15-1.40	0.06-0.2	0.12-0.14	3.0-5.9	---	.28	.28			
MwB:												
Muskellunge---------	0-9	27-40	1.00-1.25	0.2-0.6	0.16-0.21	3.0-5.9	2.0-9.0	.49	.49	5	6	48
	9-38	27-65	1.20-1.40	0.06-0.2	0.12-0.14	3.0-5.9	---	.28	.28			
	38-72	40-65	1.15-1.40	0.06-0.2	0.12-0.14	3.0-5.9	---	.28	.28			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
NeC:												
Neckrock------------	0-9	7-20	1.10-1.40	0.6-2	0.10-0.20	0.0-2.9	2.0-6.0	.28	.28	2	5	56
	9-17	7-20	1.10-1.40	0.6-2	0.09-0.19	0.0-2.9	0.0-2.0	.20	.28			
	17-27	18-22	1.30-1.60	0.2-2	0.10-0.20	0.0-2.9	0.0-1.0	.20	.28			
	27-32	7-20	1.45-1.75	0.2-2	0.09-0.18	0.0-2.9	0.0-0.0	.20	.28			
	32-40	---	---	0.0000-20	0.00-0.00	---	---	---	---			
Summerville---------	0-5	4-22	1.30-1.60	0.6-2	0.18-0.22	0.0-2.9	2.0-6.0	.32	.32	1	5	56
	5-12	4-22	1.35-1.65	0.6-2	0.10-0.16	0.0-2.9	0.0-0.5	.24	.24			
	12-20	---	---	0.0000-20	---	---	---	---	---			
NoB:												
Nicholville---------	0-9	7-18	1.20-1.50	0.6-2	0.16-0.22	0.0-2.9	2.0-6.0	.49	.49	5	5	56
	9-20	7-18	1.20-1.50	0.6-2	0.15-0.20	0.0-2.9	---	.64	.64			
	20-34	5-18	1.45-1.65	0.6-2	0.10-0.20	0.0-2.9	---	.64	.64			
	34-72	2-20	1.45-1.65	0.6-2	0.12-0.20	0.0-2.9	---	.49	.49			
NrA:												
Northway------------	0-8	1-10	1.20-1.55	6-20	0.06-0.11	0.0-2.9	2.0-8.0	.17	.17	3	2	134
	8-32	0-10	1.30-1.60	6-20	0.04-0.11	0.0-2.9	0.0-2.0	.15	.15			
	32-72	4-20	1.60-1.90	0.2-2	0.08-0.15	0.0-2.9	0.0-0.0	.24	.32			
NrB:												
Northway------------	0-8	1-10	1.20-1.55	6-20	0.06-0.11	0.0-2.9	2.0-8.0	.17	.17	3	2	134
	8-32	0-10	1.30-1.60	6-20	0.04-0.11	0.0-2.9	0.0-2.0	.15	.15			
	32-72	4-20	1.60-1.90	0.2-2	0.08-0.15	0.0-2.9	0.0-0.0	.24	.32			
OcA:												
Occur---------------	0-6	1-10	1.20-1.55	6-20	0.09-0.12	0.0-2.9	2.0-6.0	.17	.17	5	2	134
	6-29	0-10	1.30-1.60	6-20	0.04-0.10	0.0-2.9	0.0-1.0	.17	.17			
	29-72	4-20	1.50-1.80	0.2-2	0.08-0.15	0.0-2.9	0.0-0.5	.20	.28			
OcB:												
Occur---------------	0-6	1-10	1.20-1.55	6-20	0.09-0.12	0.0-2.9	2.0-6.0	.17	.17	5	2	134
	6-29	0-10	1.30-1.60	6-20	0.04-0.10	0.0-2.9	0.0-1.0	.17	.17			
	29-72	4-20	1.50-1.80	0.2-2	0.08-0.15	0.0-2.9	0.0-0.5	.20	.28			
OgB:												
Ogdensburg----------	0-9	4-20	1.10-1.40	0.6-6	0.10-0.20	0.0-2.9	2.0-8.0	.24	.24	2	5	56
	9-26	4-18	1.20-1.50	0.6-6	0.10-0.20	0.0-2.9	0.0-1.0	.20	.24			
	26-38	4-18	1.20-1.50	0.6-6	0.10-0.20	0.0-2.9	0.0-1.0	.20	.28			
	38-46	---	---	0.0000-20	---	---	---	---	---			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
PeA:												
Peasleeville--------	0-11	2-18	1.10-1.40	0.6-2	0.14-0.20	0.0-2.9	2.0-8.0	.24	.24	5	5	56
	11-42	2-18	1.30-1.60	0.6-2	0.10-0.20	0.0-2.9	0.0-2.0	.20	.28			
	42-72	2-18	1.45-1.65	0.6-2	0.08-0.15	0.0-2.9	0.0-0.5	.20	.28			
PeB:												
Peasleeville--------	0-11	2-18	1.10-1.40	0.6-2	0.14-0.20	0.0-2.9	2.0-8.0	.24	.24	5	5	56
	11-42	2-18	1.30-1.60	0.6-2	0.10-0.20	0.0-2.9	0.0-2.0	.20	.28			
	42-72	2-18	1.45-1.65	0.6-2	0.08-0.15	0.0-2.9	0.0-0.5	.20	.28			
PfB:												
Peasleeville, very stony--------------	0-11	2-18	1.10-1.40	0.6-2	0.14-0.20	0.0-2.9	2.0-8.0	.24	.24	5	8	0
	11-42	2-18	1.30-1.60	0.6-2	0.10-0.20	0.0-2.9	0.0-2.0	.20	.28			
	42-72	2-18	1.45-1.65	0.6-2	0.08-0.15	0.0-2.9	0.0-0.5	.20	.28			
Pg:												
Pinconning, undrained----------	0-9	1-10	1.00-1.20	6-20	0.12-0.14	0.0-2.9	2.0-15	.17	.17	3	2	134
	9-36	0-10	1.40-1.55	6-20	0.06-0.11	0.0-2.9	0.0-0.5	.17	.17			
	36-72	27-65	1.50-1.70	0.0015-0.2	0.08-0.12	6.0-8.9	0.0-0.5	.32	.32			
Ph:												
Pipestone-----------	0-7	2-10	1.30-1.50	6-20	0.07-0.10	0.0-2.9	0.2-8.0	.15	.15	5	1	220
	7-19	0-10	1.30-1.70	6-20	0.06-0.10	0.0-2.9	1.0-4.0	.15	.15			
	19-26	0-10	1.40-1.70	6-20	0.06-0.09	0.0-2.9	0.5-2.0	.15	.15			
	26-72	0-8	1.40-1.65	6-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
Pn:												
Pits, Gravel--------	0-6	0-5	1.25-1.55	6-20	0.02-0.04	0.0-2.9	0.5-4.0	.15	.17	-	8	0
	6-72	0-1	---	6-20	0.01-0.02	0.0-2.9	---	.02	---			
Po:												
Pits, Quarry--------	0-72	0-0	---	0.0000-20	0.00-0.00	---	---	---	---	-	8	0
Pp:												
Pits, Sand----------	0-10	0-1	---	6-20	0.03-0.05	0.0-2.9	0.0-4.0	.17	---	5	2	134
	10-72	0-1	---	6-20	0.02-0.05	0.0-2.9	---	.15	---			
PtA:												
Plainfield----------	0-8	2-10	1.50-1.65	6-20	0.09-0.12	0.0-2.9	1.0-6.0	.17	.17	5	2	134
	8-23	0-7	1.50-1.65	6-20	0.04-0.07	0.0-2.9	0.1-0.5	.15	.15			
	23-72	0-4	1.50-1.70	6-20	0.03-0.07	0.0-2.9	0.1-0.2	.15	.15			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
PtB:												
Plainfield----------	0-8	2-10	1.50-1.65	6-20	0.09-0.12	0.0-2.9	1.0-6.0	.17	.17	5	2	134
	8-23	0-7	1.50-1.65	6-20	0.04-0.07	0.0-2.9	0.1-0.5	.15	.15			
	23-72	0-4	1.50-1.70	6-20	0.03-0.07	0.0-2.9	0.1-0.2	.15	.15			
PtC:												
Plainfield----------	0-8	2-10	1.50-1.65	6-20	0.09-0.12	0.0-2.9	1.0-6.0	.17	.17	5	2	134
	8-23	0-7	1.50-1.65	6-20	0.04-0.07	0.0-2.9	0.1-0.5	.15	.15			
	23-72	0-4	1.50-1.70	6-20	0.03-0.07	0.0-2.9	0.1-0.2	.15	.15			
PvF:												
Plainfield----------	0-8	2-10	1.50-1.65	6-20	0.09-0.12	0.0-2.9	1.0-6.0	.17	.17	5	2	134
	8-23	0-7	1.50-1.65	6-20	0.04-0.07	0.0-2.9	0.1-0.5	.15	.15			
	23-72	0-4	1.50-1.70	6-20	0.03-0.07	0.0-2.9	0.1-0.2	.15	.15			
Grattan-------------	0-3	0-0	---	0.2-6	---	---	35-80	---	---	5	2	134
	3-11	2-10	1.35-1.55	6-20	0.10-0.12	0.0-2.9	1.0-6.0	.17	.17			
	11-41	0-10	1.40-1.60	6-20	0.05-0.10	0.0-2.9	0.5-4.0	.15	.15			
	41-72	0-7	1.50-1.65	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.15	.15			
RoB:												
Rock Outcrop--------	0-72	0-0	---	0.0000-0.0015	0.00-0.00	---	---	---	---	-	8	0
Ricker--------------	0-3	0-0	---	0.2-6	0.20-0.50	---	50-100	---	---	1	7	38
	3-5	0-0	0.07-0.30	2-6	0.45-0.65	0.0-2.9	50-100	---	---			
	5-6	0-0	0.15-0.60	2-6	0.35-0.45	0.0-2.9	30-99	---	---			
	6-7	3-18	1.35-1.80	0.6-6	0.06-0.18	0.0-2.9	6.0-25	.49	.55			
	7-15	---	---	0.0000-0.0015	---	---	---	---	---			
Rr:												
Roundabout----------	0-9	7-18	0.85-1.25	0.2-2	0.25-0.35	0.0-2.9	2.0-9.0	.43	.43	5	5	56
	9-31	7-18	1.30-1.60	0.2-2	0.20-0.30	0.0-2.9	0.0-4.0	.64	.64			
	31-72	7-40	1.40-1.70	0.06-0.6	0.16-0.26	0.0-2.9	0.0-0.5	.64	.64			
Ry:												
Runeberg------------	0-9	4-18	1.40-1.55	0.6-2	0.15-0.20	0.0-2.9	6.0-30	.20	.20	4	5	56
	9-22	4-18	1.60-1.80	0.2-0.6	0.12-0.18	0.0-2.9	0.5-2.0	.28	.28			
	22-72	4-18	1.75-1.85	0.06-0.6	0.06-0.13	0.0-2.9	0.0-0.5	.28	.28			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
Sb:												
Sabattis, undrained; very bouldery------	0-8	0-0	---	0.2-6	0.55-0.65	---	35-80	---	---	5	8	56
	8-11	2-18	0.80-1.10	0.6-6	0.14-0.25	0.0-2.9	6.0-20	.28	.28			
	11-26	2-18	1.30-1.60	0.6-6	0.08-0.18	0.0-2.9	0.0-3.0	.24	.28			
	26-72	2-18	1.40-1.70	0.2-0.6	0.07-0.14	0.0-2.9	0.0-1.0	.24	.28			
Se:												
Saprists, ponded----	0-7	0-0	0.30-0.60	0.2-6	0.35-0.45	0.0-2.9	50-100	---	---	-	8	0
	7-30	0-0	0.30-0.60	0.2-6	0.35-0.45	0.0-2.9	50-100	---	---			
	30-72	4-45	1.55-1.95	0.2-20	0.11-0.24	3.0-5.9	0.0-0.5	.28	.37			
Aquents, ponded-----	0-9	4-45	1.10-1.35	0.2-6	0.14-0.24	3.0-5.9	6.0-30	.37	.37	-	8	0
	9-72	2-50	1.10-1.70	0.0015-20	0.03-0.21	3.0-5.9	0.0-5.0	.32	.37			
ShB:												
Schroon-------------	0-8	2-18	1.00-1.25	0.6-2	0.09-0.19	0.0-2.9	2.0-6.0	.24	.24	5	3	86
	8-23	2-18	1.40-1.65	0.6-2	0.05-0.20	0.0-2.9	0.0-1.0	.24	.28			
	23-72	2-18	1.45-1.65	0.6-2	0.04-0.16	0.0-2.9	0.0-0.5	.24	.28			
ShC:												
Schroon-------------	0-8	2-18	1.00-1.25	0.6-2	0.09-0.19	0.0-2.9	2.0-6.0	.24	.24	5	3	86
	8-23	2-18	1.40-1.65	0.6-2	0.05-0.20	0.0-2.9	0.0-1.0	.24	.28			
	23-72	2-18	1.45-1.65	0.6-2	0.04-0.16	0.0-2.9	0.0-0.5	.24	.28			
SkB:												
Schroon, very stony-	0-8	2-18	1.00-1.25	0.6-2	0.09-0.19	0.0-2.9	2.0-6.0	.24	.24	5	8	0
	8-23	2-18	1.40-1.65	0.6-2	0.05-0.20	0.0-2.9	0.0-1.0	.24	.28			
	23-72	2-18	1.45-1.65	0.6-2	0.04-0.16	0.0-2.9	0.0-0.5	.24	.28			
Sn:												
Sciota--------------	0-9	1-5	1.35-1.50	6-20	0.07-0.09	0.0-2.9	2.0-8.0	.15	.15	5	1	220
	9-37	1-5	1.35-1.55	6-20	0.05-0.10	0.0-2.9	0.0-1.0	.15	.15			
	37-72	1-5	1.30-1.60	6-20	0.04-0.10	0.0-2.9	0.0-0.0	.15	.15			
So:												
Shaker--------------	0-9	7-20	1.00-1.25	2-6	0.18-0.22	0.0-2.9	2.0-9.0	.28	.28	3	5	56
	9-25	7-20	1.35-1.60	2-6	0.12-0.20	0.0-2.9	---	.24	.24			
	25-72	27-60	1.55-1.80	0.0015-0.2	0.09-0.15	3.0-5.9	---	.43	.43			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
SpB:												
Sheddenbrook--------	0-1	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	2	3	86
	1-7	2-10	1.00-1.30	6-20	0.09-0.15	0.0-2.9	2.0-6.0	.15	.17			
	7-27	0-10	1.10-1.40	6-20	0.04-0.10	0.0-2.9	0.0-2.0	.10	.17			
	27-30	0-10	1.30-1.60	6-20	0.03-0.08	0.0-2.9	0.0-0.5	.10	.17			
	30-38	---	---	0.0000-0.0015	0.00-0.00	---	---	---	---			
SrB:												
Skerry--------------	0-5	2-20	0.60-1.20	0.6-2	0.10-0.23	0.0-2.9	2.0-8.0	.24	.24	5	3	86
	5-24	2-18	1.30-1.60	0.6-2	0.06-0.16	0.0-2.9	---	.28	.32			
	24-72	2-18	1.60-1.75	0.06-0.6	0.03-0.09	0.0-2.9	---	.17	.24			
SsB:												
Skerry, very bouldery-----------	0-5	2-20	0.60-1.20	0.6-2	0.10-0.23	0.0-2.9	2.0-8.0	.24	.24	5	8	86
	5-24	2-18	1.30-1.60	0.6-2	0.06-0.16	0.0-2.9	---	.28	.32			
	24-72	2-18	1.60-1.75	0.06-0.6	0.03-0.09	0.0-2.9	---	.17	.24			
SsC:												
Skerry, very bouldery-----------	0-5	2-20	0.60-1.20	0.6-2	0.10-0.23	0.0-2.9	2.0-8.0	.24	.24	5	8	86
	5-24	2-18	1.30-1.60	0.6-2	0.06-0.16	0.0-2.9	---	.28	.32			
	24-72	2-18	1.60-1.75	0.06-0.6	0.03-0.09	0.0-2.9	---	.17	.24			
StD:												
Success, very bouldery-----------	0-8	2-20	0.90-1.20	2-6	0.10-0.20	0.0-2.9	2.0-6.0	.10	.15	3	8	86
	8-18	2-18	0.90-1.30	2-6	0.05-0.18	0.0-2.9	1.0-12	.20	.28			
	18-37	2-18	1.40-1.75	2-6	0.01-0.03	0.0-2.9	0.0-1.0	.10	.17			
	37-72	0-10	1.30-1.40	6-20	0.01-0.03	0.0-2.9	0.0-0.5	.10	.17			
SwB:												
Sunapee-------------	0-7	2-18	0.80-1.20	0.6-2	0.16-0.22	0.0-2.9	2.0-8.0	.28	.28	5	3	86
	7-39	2-18	0.80-1.30	0.6-2	0.07-0.17	0.0-2.9	---	.20	.24			
	39-72	2-18	1.20-1.50	0.6-6	0.03-0.17	0.0-2.9	---	.20	.24			
SxB:												
Sunapee, very bouldery-----------	0-7	2-18	0.80-1.20	0.6-2	0.16-0.22	0.0-2.9	2.0-8.0	.28	.28	5	8	86
	7-39	2-18	0.80-1.30	0.6-2	0.07-0.17	0.0-2.9	---	.20	.24			
	39-72	2-18	1.20-1.50	0.6-6	0.03-0.17	0.0-2.9	---	.20	.24			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
Sz:												
Swanton-------------	0-9	7-20	1.00-1.30	2-6	0.13-0.25	0.0-2.9	2.0-9.0	.28	.28	5	3	86
	9-31	5-20	1.15-1.45	2-6	0.12-0.20	0.0-2.9	0.5-3.0	.32	.32			
	31-72	27-60	1.40-1.70	0.0015-0.2	0.11-0.16	3.0-5.9	0.0-0.5	.49	.49			
TcB:												
Topknot-------------	0-7	2-20	1.10-1.40	0.6-2	0.10-0.16	0.0-2.9	2.0-9.0	.20	.28	1	5	56
	7-14	2-20	1.20-1.55	0.6-2	0.09-0.14	0.0-2.9	0.0-1.0	.20	.28			
	14-22	0-0	---	0.0000-0.0015	0.00-0.00	---	---	---	---			
Chazy---------------	0-10	2-20	1.10-1.40	0.6-2	0.14-0.20	0.0-2.9	2.0-9.0	.24	.24	2	5	56
	10-28	2-20	1.30-1.60	0.6-2	0.10-0.15	0.0-2.9	0.0-1.0	.20	.24			
	28-36	---	---	0.0000-0.0015	0.00-0.00	---	---	---	---			
TnC:												
Tunbridge, very bouldery-----------	0-4	2-18	0.80-1.20	0.6-6	0.11-0.21	0.0-2.9	2.0-8.0	.20	.24	2	8	0
	4-26	2-18	1.20-1.40	0.6-6	0.10-0.21	0.0-2.9	1.0-6.0	.20	.28			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			
Lyman, very bouldery	0-3	0-0	---	0.2-6	0.25-0.65	---	35-80	---	---	1	---	---
	3-6	2-20	0.75-1.20	2-6	0.13-0.24	0.0-2.9	1.0-6.0	.20	.28			
	6-17	2-20	0.90-1.40	2-6	0.08-0.28	0.0-2.9	---	.32	.37			
	17-25	---	---	0.0000-0.0015	---	---	---	---	---			
TnE:												
Tunbridge, very bouldery-----------	0-4	2-18	0.80-1.20	0.6-6	0.11-0.21	0.0-2.9	2.0-8.0	.20	.24	2	8	0
	4-26	2-18	1.20-1.40	0.6-6	0.10-0.21	0.0-2.9	1.0-6.0	.20	.28			
	26-34	---	---	0.0000-0.0015	---	---	---	---	---			
Lyman, very bouldery	0-3	0-0	---	0.2-6	0.25-0.65	---	35-80	---	---	1	---	---
	3-6	2-20	0.75-1.20	2-6	0.13-0.24	0.0-2.9	1.0-6.0	.20	.28			
	6-17	2-20	0.90-1.40	2-6	0.08-0.28	0.0-2.9	---	.32	.37			
	17-25	---	---	0.0000-0.0015	---	---	---	---	---			
Ud:												
Udipsamments, smoothed-----------	0-6	0-10	---	6-20	0.03-0.08	---	2.0-6.0	---	---	-	---	---
	6-72	0-5	---	6-101	0.03-0.05	---	---	---	---			

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
Ud:												
Psammaquents, smoothed-----------	0-6	---	---	6-20	0.03-0.08	---	2.0-6.0	---	---	-	---	---
	6-72	---	---	6-101	0.03-0.05	---	---	---	---			
Ue:												
Udipsamments, Mine Spoil, non-acid----	0-72	0-5	1.00-1.30	6-101	0.03-0.08	0.0-2.9	0.0-1.0	.10	.10	5	2	134
Uf:												
Udorthents, Refuse Substratum---------	0-6	0-28	1.20-1.80	0.06-20	0.03-0.15	0.0-2.9	0.0-4.0	.32	.37	-	---	0
	6-72	---	---	0.06-20	0.01-0.10	---	---	---	---			
Ug:												
Udorthents, smoothed	0-4	4-27	1.20-1.80	0.06-20	0.06-0.15	0.0-2.9	0.0-5.0	.37	.37	5	5	56
	4-72	4-40	1.30-1.90	0.06-6	0.04-0.13	0.0-2.9	---	.32	.37			
Uh:												
Udorthents, wet substratum---------	0-4	4-27	1.20-1.80	0.06-20	0.06-0.15	0.0-2.9	0.0-5.0	.37	.37	5	8	0
	4-72	4-40	1.30-1.90	0.06-6	0.04-0.13	0.0-2.9	---	.32	.37			
Un:												
Urban Land----------	0-6	0-0	---	0.0000-0.0015	0.00-0.00	---	---	---	---	-	---	---
UpA:												
Urban Land----------	0-6	0-0	---	0.0000-0.0015	0.00-0.00	---	0.0-0.0	---	---	-	---	---
Plainfield----------	0-8	2-10	1.50-1.65	6-20	0.09-0.12	0.0-2.9	1.0-6.0	.17	.17	5	2	134
	8-23	0-7	1.50-1.65	6-20	0.04-0.07	0.0-2.9	0.1-0.5	.15	.15			
	23-72	0-4	1.50-1.70	6-20	0.03-0.07	0.0-2.9	0.1-0.2	.15	.15			
UpB:												
Urban Land----------	0-6	0-0	---	0.0000-0.0015	0.00-0.00	---	0.0-0.0	---	---	-	---	---
Plainfield----------	0-8	2-10	1.50-1.65	6-20	0.09-0.12	0.0-2.9	1.0-6.0	.17	.17	5	2	134
	8-23	0-7	1.50-1.65	6-20	0.04-0.07	0.0-2.9	0.1-0.5	.15	.15			
	23-72	0-4	1.50-1.70	6-20	0.03-0.07	0.0-2.9	0.1-0.2	.15	.15			
W:												
Water, areas < 40 acres--------------	---	---	---	---	---	---	---	---	---	-	---	---

Table 15.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
WdB:												
Waddington----------	0-9	2-20	0.90-1.20	0.6-2	0.08-0.13	0.0-2.9	2.0-6.0	.17	.24	3	5	86
	9-26	2-20	1.20-1.40	2-6	0.07-0.14	0.0-2.9	---	.17	.20			
	26-31	2-10	1.30-1.50	6-20	0.01-0.08	0.0-2.9	---	.17	.24			
	31-72	0-10	1.30-1.50	6-20	0.01-0.08	0.0-2.9	---	.17	.24			
Wn:												
Wainola, high ppt.--	0-1	0-0	---	0.2-6	0.20-0.50	---	35-80	---	---	5	2	134
	1-7	0-10	1.35-1.50	6-20	0.10-0.12	0.0-2.9	1.0-8.0	.17	.17			
	7-22	0-10	1.35-1.50	6-20	0.06-0.11	0.0-2.9	0.6-1.0	.15	.15			
	22-34	0-10	1.35-1.45	6-20	0.06-0.11	0.0-2.9	0.0-0.5	.15	.15			
	34-72	0-8	1.25-1.50	6-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
WsB:												
Wallace-------------	0-8	1-10	1.35-1.45	6-20	0.07-0.12	0.0-2.9	0.5-8.0	.15	.15	2	1	250
	8-33	0-10	1.75-2.05	0.6-6	0.01-0.04	0.0-2.9	0.5-2.0	.15	.15			
	33-72	0-6	1.45-1.60	6-20	0.04-0.05	0.0-2.9	0.0-0.5	.15	.15			
WsC:												
Wallace-------------	0-8	1-10	1.35-1.45	6-20	0.07-0.12	0.0-2.9	0.5-8.0	.15	.15	2	1	250
	8-33	0-10	1.75-2.05	0.6-6	0.01-0.04	0.0-2.9	0.5-2.0	.15	.15			
	33-72	0-6	1.45-1.60	6-20	0.04-0.05	0.0-2.9	0.0-0.5	.15	.15			
WsE:												
Wallace-------------	0-8	1-10	1.35-1.45	6-20	0.07-0.12	0.0-2.9	0.5-8.0	.15	.15	2	1	250
	8-33	0-10	1.75-2.05	0.6-6	0.01-0.04	0.0-2.9	0.5-2.0	.15	.15			
	33-72	0-6	1.45-1.60	6-20	0.04-0.05	0.0-2.9	0.0-0.5	.15	.15			
Wu:												
Wonsqueak-----------	0-7	0-6	0.10-0.30	0.2-6	0.20-0.40	---	60-100	---	---	2	8	0
	7-31	0-6	0.10-0.30	0.2-6	0.20-0.40	---	50-99	---	---			
	31-72	4-30	1.50-1.70	0.2-2	0.06-0.16	0.0-2.9	0.0-2.0	.49	.49			

Table 16.—Chemical Properties of the Soils

(Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
15:					
Loxley, undrained, high ppt.-----------	0-16	---	50-100	3.5-4.4	0
	16-72	---	50-120	3.5-4.4	0
Beseman, undrained---	0-2	---	---	3.5-4.4	---
	2-10	---	50-198	3.5-4.4	---
	10-45	---	50-150	3.5-4.4	---
	45-72	---	4.0-17	3.5-7.3	---
17:					
Beseman, undrained---	0-2	---	---	3.5-4.4	---
	2-10	---	50-198	3.5-4.4	---
	10-45	---	50-150	3.5-4.4	---
	45-72	---	4.0-17	3.5-7.3	---
Rumney---------------	0-12	20-35	---	4.5-7.3	0
	12-39	4.0-18	---	4.5-7.3	0
	39-72	1.0-10	---	4.5-7.3	0
Loxley, undrained----	0-16	---	50-100	3.5-4.4	0
	16-72	---	50-120	3.5-4.4	0
367:					
Searsport------------	0-8	---	20-50	4.5-6.5	0
	8-50	1.0-2.0	---	4.5-6.5	0
	50-72	0.0-1.0	---	4.5-6.5	0
Borosaprists---------	0-7	90-160	---	4.5-7.3	0
	7-30	90-160	---	4.5-7.3	0
	30-72	---	4.0-17	5.1-7.3	0
Naumburg-------------	0-2	---	---	3.5-5.5	---
	2-3	---	---	3.5-5.5	---
	3-7	---	---	3.5-5.5	0
	7-33	---	---	3.5-5.5	0
	33-72	---	---	4.5-6.5	0
375C:					
Colton---------------	0-1	---	---	3.5-6.0	---
	1-3	---	10-25	3.6-6.0	0
	3-22	---	5.0-30	3.6-6.0	0
	22-72	1.0-5.0	---	4.5-6.5	0
Adams----------------	0-7	---	12-26	3.6-5.5	0
	7-9	---	12-26	4.5-5.5	---
	9-27	---	10-23	4.5-6.0	0
	27-72	1.0-5.0	---	4.5-6.5	0
375F:					
Colton---------------	0-1	---	---	3.5-6.0	---
	1-3	---	10-25	3.6-6.0	0
	3-22	---	5.0-30	3.6-6.0	0
	22-72	1.0-5.0	---	4.5-6.5	0

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
375F:					
Adams	0-7	---	12-26	3.6-5.5	0
	7-9	---	12-26	4.5-5.5	---
	9-27	---	10-23	4.5-6.0	0
	27-72	1.0-5.0	---	4.5-6.5	0
651C:					
Monadnock, very bouldery	0-2	---	---	3.6-6.0	---
	2-36	---	---	3.6-6.0	---
	36-72	---	---	3.6-6.0	---
Tunbridge, very bouldery	0-4	---	6.0-12	3.6-6.0	0
	4-26	---	5.0-16	3.6-6.0	0
	26-34	---	---	---	---
Sabattis, undrained; very bouldery	0-8	---	---	4.5-6.5	---
	8-11	20-45	---	4.5-6.5	0
	11-26	4.0-18	---	4.5-7.3	0
	26-72	1.0-9.0	---	5.1-7.8	0
651D:					
Monadnock, very bouldery	0-2	---	---	3.6-6.0	---
	2-36	---	---	3.6-6.0	---
	36-72	---	---	3.6-6.0	---
Tunbridge, very bouldery	0-4	---	6.0-12	3.6-6.0	0
	4-26	---	5.0-16	3.6-6.0	0
	26-34	---	---	---	---
653C:					
Monadnock, very bouldery	0-2	---	---	3.6-6.0	---
	2-36	---	---	3.6-6.0	---
	36-72	---	---	3.6-6.0	---
654C:					
Monadnock, very bouldery	0-2	---	---	3.6-6.0	---
	2-36	---	---	3.6-6.0	---
	36-72	---	---	3.6-6.0	---
Sabattis, very bouldery	0-8	---	---	4.5-6.5	---
	8-11	20-45	---	4.5-6.5	0
	11-26	4.0-18	---	4.5-7.3	0
	26-72	1.0-9.0	---	5.1-7.8	0
655B:					
Sunapee, very bouldery	0-7	---	---	3.6-5.5	---
	7-39	---	---	3.6-5.5	---
	39-72	---	---	3.6-6.0	---
Monadnock, very bouldery	0-2	---	---	3.6-6.0	---
	2-36	---	---	3.6-6.0	---
	36-72	---	---	3.6-6.0	---

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
661C:					
Hermon, very bouldery	0-6	---	3.0-8.0	3.6-5.5	0
	6-10	---	2.0-4.0	3.6-6.0	0
	10-37	---	1.0-6.0	3.6-6.0	0
	37-72	0.0-1.0	---	5.1-6.0	0
661D:					
Hermon, very bouldery	0-6	---	3.0-8.0	3.6-5.5	0
	6-10	---	2.0-4.0	3.6-6.0	0
	10-37	---	1.0-6.0	3.6-6.0	0
	37-72	0.0-1.0	---	5.1-6.0	0
708B:					
Adirondack, very bouldery------------	0-5	---	15-40	3.5-5.5	0
	5-22	---	20-60	3.5-5.5	0
	22-72	5.0-15	---	5.1-6.0	0
Sabattis, undrained; very bouldery-------	0-8	---	---	4.5-6.5	---
	8-11	20-45	---	4.5-6.5	0
	11-26	4.0-18	---	4.5-7.3	0
	26-72	1.0-9.0	---	5.1-7.8	0
Tughill, very bouldery------------	0-13	---	10-40	3.5-5.5	0
	13-37	---	5.0-20	3.5-6.0	0
	37-72	2.0-15	---	5.6-6.5	0
721C:					
Becket, very bouldery	0-4	---	---	3.6-6.5	---
	4-23	---	---	3.6-6.5	---
	23-72	---	---	4.5-7.3	---
Tunbridge, very bouldery------------	0-4	---	6.0-12	3.6-6.0	0
	4-26	---	5.0-16	3.6-6.0	0
	26-34	---	---	---	---
Skerry, very bouldery	0-5	---	---	4.5-6.5	---
	5-24	---	---	4.5-6.5	---
	24-72	---	---	4.5-7.3	---
721D:					
Becket, very bouldery	0-4	---	---	3.6-6.5	---
	4-23	---	---	3.6-6.5	---
	23-72	---	---	4.5-7.3	---
Tunbridge, very bouldery------------	0-4	---	6.0-12	3.6-6.0	0
	4-26	---	5.0-16	3.6-6.0	0
	26-34	---	---	---	---
723C:					
Becket, very bouldery	0-4	---	---	3.6-6.5	---
	4-23	---	---	3.6-6.5	---
	23-72	---	---	4.5-7.3	---

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
723D:					
Becket, very bouldery	0-4	---	---	3.6-6.5	---
	4-23	---	---	3.6-6.5	---
	23-72	---	---	4.5-7.3	---
725B:					
Skerry, very bouldery	0-5	---	---	4.5-6.5	---
	5-24	---	---	4.5-6.5	---
	24-72	---	---	4.5-7.3	---
Becket, very bouldery	0-4	---	---	3.6-6.5	---
	4-23	---	---	3.6-6.5	---
	23-72	---	---	4.5-7.3	---
727B:					
Skerry, very bouldery	0-5	---	---	4.5-6.5	---
	5-24	---	---	4.5-6.5	---
	24-72	---	---	4.5-7.3	---
Adirondack, very bouldery------------	0-5	---	15-40	3.6-5.5	0
	5-22	---	20-60	3.6-5.5	0
	22-72	5.0-15	---	5.1-6.0	0
831C:					
Tunbridge, very bouldery------------	0-4	---	6.0-12	3.6-6.0	0
	4-26	---	5.0-16	3.6-6.0	0
	26-34	---	---	---	---
Lyman, very bouldery-	0-3	---	---	3.5-6.0	---
	3-6	---	---	3.5-6.0	---
	6-17	---	---	3.5-6.0	---
	17-25	---	---	---	---
831D:					
Tunbridge, very bouldery------------	0-4	---	6.0-12	3.6-6.0	0
	4-26	---	5.0-16	3.6-6.0	0
	26-34	---	---	---	---
Lyman, very bouldery-	0-3	---	---	3.5-6.0	---
	3-6	---	---	3.5-6.0	---
	6-17	---	---	3.5-6.0	---
	17-25	---	---	---	---
831F:					
Tunbridge, very bouldery------------	0-4	---	6.0-12	3.6-6.0	0
	4-26	---	5.0-16	3.6-6.0	0
	26-34	---	---	---	---
Lyman, very bouldery-	0-3	---	---	3.5-6.0	---
	3-6	---	---	3.5-6.0	---
	6-17	---	---	3.5-6.0	---
	17-25	---	---	---	---

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
861F:					
Lyman, very bouldery-	0-3	---	---	3.5-6.0	---
	3-6	---	---	3.5-6.0	---
	6-17	---	---	3.5-6.0	---
	17-25	---	---	---	---
Ricker, very bouldery	0-3	---	---	3.5-4.4	---
	3-5	---	---	3.5-4.4	---
	5-6	---	---	3.5-4.4	---
	6-7	---	---	3.5-5.0	---
	7-15	---	---	---	---
931C:					
Mundalite, very bouldery------------	0-1	---	---	3.5-6.0	---
	1-3	---	20-40	3.5-6.0	0
	3-27	---	15-65	3.5-6.0	0
	27-37	2.0-10	---	4.5-6.5	0
	37-72	2.0-10	---	4.5-6.5	0
Rawsonville, very bouldery------------	0-1	---	---	3.5-5.5	---
	1-3	---	---	3.5-5.5	---
	3-4	---	---	3.5-5.5	---
	4-22	---	---	3.5-5.5	---
	22-26	---	---	3.5-5.5	---
	26-34	---	---	---	---
Worden, very bouldery	0-4	---	---	3.5-6.0	---
	4-21	---	---	3.5-6.0	---
	21-72	---	---	5.1-6.5	---
931D:					
Mundalite, very bouldery------------	0-1	---	---	3.5-6.0	---
	1-3	---	20-40	3.5-6.0	0
	3-27	---	15-65	3.5-6.0	0
	27-37	2.0-10	---	4.5-6.5	0
	37-72	2.0-10	---	4.5-6.5	0
Rawsonville, very bouldery------------	0-1	---	---	3.5-5.5	---
	1-3	---	---	3.5-5.5	---
	3-4	---	---	3.5-5.5	---
	4-22	---	---	3.5-5.5	---
	22-26	---	---	3.5-5.5	---
	26-34	---	---	---	---
933C:					
Mundalite, very bouldery------------	0-1	---	---	3.5-6.0	---
	1-3	---	20-40	3.5-6.0	0
	3-27	---	15-65	3.5-6.0	0
	27-37	2.0-10	---	4.5-6.5	0
	37-72	2.0-10	---	4.5-6.5	0
Worden, very bouldery	0-4	---	---	3.5-6.0	---
	4-21	---	---	3.5-6.0	---
	21-72	---	---	5.1-6.5	---

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
941C:					
Rawsonville, very bouldery------------	0-1	---	---	3.5-5.5	---
	1-3	---	---	3.5-5.5	---
	3-4	---	---	3.5-5.5	---
	4-22	---	---	3.5-5.5	---
	22-26	---	---	3.5-5.5	---
	26-34	---	---	---	---
Hogback, very bouldery------------	0-1	---	15-75	3.5-5.5	---
	1-6	---	15-75	3.5-5.5	---
	6-14	---	15-50	3.5-5.5	---
	14-22	---	---	---	---
941D:					
Rawsonville, very bouldery------------	0-1	---	---	3.5-5.5	---
	1-3	---	---	3.5-5.5	---
	3-4	---	---	3.5-5.5	---
	4-22	---	---	3.5-5.5	---
	22-26	---	---	3.5-5.5	---
	26-34	---	---	---	---
Hogback, very bouldery------------	0-1	---	15-75	3.5-5.5	---
	1-6	---	15-75	3.5-5.5	---
	6-14	---	15-50	3.5-5.5	---
	14-22	---	---	---	---
941F:					
Rawsonville, very bouldery------------	0-1	---	---	3.5-5.5	---
	1-3	---	---	3.5-5.5	---
	3-4	---	---	3.5-5.5	---
	4-22	---	---	3.5-5.5	---
	22-26	---	---	3.5-5.5	---
	26-34	---	---	---	---
Hogback, very bouldery------------	0-1	---	15-75	3.5-5.5	---
	1-6	---	15-75	3.5-5.5	---
	6-14	---	15-50	3.5-5.5	---
	14-22	---	---	---	---
943C:					
Rawsonville, very bouldery------------	0-1	---	---	3.5-5.5	---
	1-3	---	---	3.5-5.5	---
	3-4	---	---	3.5-5.5	---
	4-22	---	---	3.5-5.5	---
	22-26	---	---	3.5-5.5	---
	26-34	---	---	---	---
Borosaprists---------	0-7	90-160	---	4.5-7.3	0-5
	7-30	90-160	---	4.5-7.3	0-5
	30-72	---	4.0-17	5.1-7.3	---

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
943C:					
Ricker, very bouldery	0-3	---	---	3.5-4.4	---
	3-5	---	---	3.5-4.4	---
	5-6	---	---	3.5-4.4	---
	6-7	---	---	3.5-5.0	---
	7-15	---	---	---	---
945F:					
Hogback, very bouldery-----------	0-1	---	15-75	3.5-5.5	---
	1-6	---	15-75	3.5-5.5	---
	6-14	---	15-50	3.5-5.5	---
	14-22	---	---	---	---
Ricker, very bouldery	0-3	---	---	3.5-4.4	---
	3-5	---	---	3.5-4.4	---
	5-6	---	---	3.5-4.4	---
	6-7	---	---	3.5-5.0	---
	7-15	---	---	---	---
949F:					
Rock outcrop----------	0-72	---	---	---	---
Ricker, very bouldery	0-3	---	---	3.5-4.4	---
	3-5	---	---	3.5-4.4	---
	5-6	---	---	3.5-4.4	---
	6-7	---	---	3.5-5.0	---
	7-15	---	---	---	---
Hogback, very bouldery-----------	0-1	---	15-75	3.6-5.5	---
	1-6	---	15-75	3.6-5.5	---
	6-14	---	15-50	3.6-5.5	---
	14-22	---	---	---	---
991D:					
Glebe, very bouldery-	0-1	---	---	3.5-5.5	---
	1-12	---	---	3.5-5.5	---
	12-24	---	---	3.5-5.5	---
	24-32	---	---	---	---
Skylight, very bouldery-----------	0-2	---	---	3.5-5.5	---
	2-5	---	---	3.5-5.5	---
	5-9	---	20-150	3.5-5.5	0
	9-15	---	20-50	3.5-5.5	0
	15-23	---	---	---	0
997F:					
Ricker, very bouldery	0-3	---	---	3.5-4.4	---
	3-5	---	---	3.5-4.4	---
	5-6	---	---	3.5-4.4	---
	6-7	---	---	3.5-5.0	---
	7-15	---	---	---	---
Skylight, very bouldery-----------	0-2	---	---	3.5-5.5	---
	2-5	---	---	3.5-5.5	---
	5-9	---	20-150	3.5-5.5	0
	9-15	---	20-50	3.5-5.5	0
	15-23	---	---	---	0

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
997F:					
Rock Outcrop	0-72	---	---	---	---
AbA:					
Adams	0-7	---	12-26	3.6-5.5	0
	7-9	---	12-26	4.5-5.5	0
	9-27	---	10-23	4.5-6.0	0
	27-72	1.0-5.0	---	4.5-6.5	0
AbB:					
Adams	0-7	---	12-26	3.6-5.5	0
	7-9	---	12-26	4.5-5.5	0
	9-27	---	10-23	4.5-6.0	0
	27-72	1.0-5.0	---	4.5-6.5	0
AbC:					
Adams	0-7	---	12-26	3.6-5.5	0
	7-9	---	12-26	4.5-5.5	0
	9-27	---	10-23	4.5-6.0	0
	27-72	1.0-5.0	---	4.5-6.5	0
AbD:					
Adams	0-7	---	12-26	3.6-5.5	0
	7-9	---	12-26	4.5-5.5	---
	9-27	---	10-23	4.5-6.0	0
	27-72	1.0-5.0	---	4.5-6.5	0
AgB:					
Adirondack	0-5	---	15-40	3.6-5.5	0
	5-22	---	20-60	3.6-5.5	0
	22-72	5.0-15	---	5.1-6.0	0
AhB:					
Adirondack, very bouldery	0-5	---	15-40	3.6-5.5	0
	5-22	---	20-60	3.6-5.5	0
	22-72	5.0-15	---	5.1-6.0	0
Ak:					
Adjidaumo	0-7	---	---	6.1-7.3	0
	7-36	---	---	6.6-7.8	0-3
	36-72	---	---	7.4-8.4	1-5
Am:					
Adjidaumo, mucky silty clay	0-7	---	---	6.1-7.3	0
	7-36	---	---	6.6-7.8	0-3
	36-72	---	---	7.4-8.4	1-5
AtA:					
Amenia	0-9	---	---	5.6-7.8	0
	9-28	---	---	5.6-7.8	0-2
	28-36	---	---	7.4-8.4	2-10
	36-72	---	---	7.4-8.4	2-10
AtB:					
Amenia	0-9	---	---	5.6-7.8	0
	9-28	---	---	5.6-7.8	0-2
	28-36	---	---	7.4-8.4	2-10
	36-72	---	---	7.4-8.4	2-10

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
AwA:					
Appleton-------------	0-10	---	---	5.6-7.3	0
	10-18	---	---	5.6-7.8	0
	18-30	---	---	5.6-7.8	0-5
	30-72	---	---	7.4-8.4	2-10
AwB:					
Appleton-------------	0-10	---	---	5.6-7.3	0
	10-18	---	---	5.6-7.8	0
	18-30	---	---	5.6-7.8	0-5
	30-72	---	---	7.4-8.4	2-10
BcB:					
Becket---------------	0-4	---	---	3.6-6.5	0
	4-23	---	---	3.6-6.5	0
	23-72	---	---	4.5-7.3	0
BeC:					
Becket, very bouldery	0-4	---	---	3.6-6.5	0
	4-23	---	---	3.6-6.5	0
	23-72	---	---	4.5-7.3	0
BeD:					
Becket, very bouldery	0-4	---	---	3.6-6.5	0
	4-23	---	---	3.6-6.5	0
	23-72	---	---	4.5-7.3	0
BgC:					
Becket, very bouldery	0-4	---	---	3.6-6.5	0
	4-23	---	---	3.6-6.5	0
	23-72	---	---	4.5-7.3	0
Tunbridge, very bouldery------------	0-4	---	6.0-12	3.6-6.0	0
	4-26	---	5.0-16	3.6-6.0	0
	26-34	---	---	---	---
BgE:					
Becket, very bouldery	0-4	---	---	3.6-6.5	0
	4-23	---	---	3.6-6.5	0
	23-72	---	---	4.5-7.3	0
Tunbridge, very bouldery------------	0-4	---	6.0-12	3.6-6.0	0
	4-26	---	5.0-16	3.6-6.0	0
	26-34	---	---	---	---
BhC:					
Benson---------------	0-6	---	---	5.6-7.8	0-1
	6-14	---	---	6.1-7.8	0-5
	14-18	---	---	6.6-7.8	0-5
	18-26	---	---	---	---
BhE:					
Benson---------------	0-6	---	---	5.6-7.8	0-1
	6-14	---	---	6.1-7.8	0-5
	14-18	---	---	6.6-7.8	0-5
	18-26	---	---	---	---

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
Bo:					
Beseman	0-2	---	---	3.5-4.4	0
	2-10	---	50-198	3.5-4.4	0
	10-45	---	50-150	3.5-4.4	0
	45-72	---	4.0-17	3.5-7.3	0
BrB:					
Bice	0-11	---	10-20	4.5-6.0	0
	11-26	---	5.0-15	4.5-6.0	0
	26-72	---	3.0-10	4.5-6.0	0
BrC:					
Bice	0-11	---	10-20	4.5-6.0	0
	11-26	---	5.0-15	4.5-6.0	0
	26-72	---	3.0-10	4.5-6.0	0
BsC:					
Bice, very stony	0-11	---	10-20	4.5-6.0	0
	11-26	---	5.0-15	4.5-6.0	0
	26-72	---	3.0-10	4.5-6.0	0
BvB:					
Bombay	0-9	---	---	5.1-6.5	0
	9-23	---	---	5.1-7.3	0
	23-56	---	---	5.1-7.3	0-1
	56-72	---	---	6.1-8.4	2-10
Bx:					
Bucksport	0-7	---	20-50	3.6-5.5	0
	7-47	---	20-50	3.6-6.0	0
	47-72	20-50	---	4.5-6.5	0
CgA:					
Champlain	0-2	---	---	3.5-5.5	0
	2-10	7.0-15	---	5.1-6.5	0
	10-33	3.0-10	---	5.1-6.5	0
	33-72	2.0-9.0	---	5.6-7.3	0
CgB:					
Champlain	0-2	---	---	3.5-5.5	0
	2-10	7.0-15	---	5.1-6.5	0
	10-33	3.0-10	---	5.1-6.5	0
	33-72	2.0-9.0	---	5.6-7.3	0
CgC:					
Champlain	0-2	---	---	3.5-5.5	0
	2-10	7.0-15	---	5.1-6.5	0
	10-33	3.0-10	---	5.1-6.5	0
	33-72	2.0-9.0	---	5.6-7.3	0
ChF:					
Champlain	0-2	---	---	3.5-5.5	---
	2-10	7.0-15	---	5.1-6.5	0
	10-33	3.0-10	---	5.1-6.5	0
	33-72	2.0-9.0	---	5.6-7.3	0
Adams	0-7	---	12-26	3.6-5.5	0
	7-9	---	12-26	4.5-5.5	0
	9-27	---	10-23	4.5-6.0	0
	27-72	1.0-5.0	---	4.5-6.5	0

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
Ck:					
Churubusco-----------	0-2	---	80-150	3.5-4.4	0
	2-32	---	90-160	3.5-4.4	0
	32-40	---	---	---	0
ClC:					
Colosse, very stony--	0-2	---	---	4.5-5.5	---
	2-6	---	5.0-15	4.5-5.5	0
	6-30	---	5.0-10	4.5-5.5	0
	30-72	5.0-10	---	5.1-6.0	0
Hermon, very stony---	0-6	---	3.0-8.0	3.6-5.5	0
	6-10	---	2.0-4.0	3.6-6.0	0
	10-37	---	1.0-6.0	3.6-6.0	0
	37-72	0.0-1.0	---	5.1-6.0	0
CmB:					
Colosse--------------	0-2	---	---	4.5-5.5	---
	2-6	---	5.0-15	4.5-5.5	0
	6-30	---	5.0-10	4.5-5.5	0
	30-72	5.0-10	---	5.1-6.0	0
Trout River----------	0-1	---	---	4.5-5.5	---
	1-3	---	5.0-12	4.5-5.5	0
	3-6	---	5.0-12	4.5-5.5	0
	6-31	5.0-10	---	5.1-7.3	0-1
	31-72	5.0-8.0	---	5.6-8.4	2-5
CmC:					
Colosse--------------	0-2	---	---	4.5-5.5	---
	2-6	---	5.0-15	4.5-5.5	0
	6-30	---	5.0-10	4.5-5.5	0
	30-72	5.0-10	---	5.1-6.0	0
Trout River----------	0-1	---	---	4.5-5.5	---
	1-3	---	5.0-12	4.5-5.5	0
	3-6	---	5.0-12	4.5-5.5	0
	6-31	5.0-10	---	5.1-7.3	0-1
	31-72	5.0-8.0	---	5.6-8.4	2-5
CnC:					
Colosse, very stony--	0-2	---	---	4.5-5.5	---
	2-6	---	5.0-15	4.5-5.5	0
	6-30	---	5.0-10	4.5-5.5	0
	30-72	5.0-10	---	5.1-6.0	0
Trout River, very stony---------------	0-1	---	---	4.5-5.5	---
	1-3	---	5.0-12	4.5-5.5	0
	3-6	---	5.0-12	4.5-5.5	0
	6-31	5.0-10	---	5.1-7.3	0-1
	31-72	5.0-8.0	---	5.6-8.4	2-5
CnD:					
Colosse, very stony--	0-2	---	---	4.5-5.5	---
	2-6	---	5.0-15	4.5-5.5	0
	6-30	---	5.0-10	4.5-5.5	0
	30-72	5.0-10	---	5.1-6.0	0

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
CnD:					
Trout River, very stony	0-1	---	---	4.5-5.5	---
	1-3	---	5.0-12	4.5-5.5	0
	3-6	---	5.0-12	4.5-5.5	0
	6-31	5.0-10	---	5.1-7.3	0-1
	31-72	5.0-8.0	---	5.6-8.4	2-5
CoA:					
Colton	0-1	---	---	3.5-6.0	---
	1-3	---	10-25	3.6-6.0	0
	3-22	---	5.0-30	3.6-6.0	0
	22-72	1.0-5.0	---	4.5-6.5	0
CoB:					
Colton	0-1	---	---	3.5-6.0	---
	1-3	---	10-25	3.6-6.0	0
	3-22	---	5.0-30	3.6-6.0	0
	22-72	1.0-5.0	---	4.5-6.5	0
CoC:					
Colton	0-1	---	---	3.5-6.0	---
	1-3	---	10-25	3.6-6.0	0
	3-22	---	5.0-30	3.6-6.0	0
	22-72	1.0-5.0	---	4.5-6.5	0
CpC:					
Colton, very stony	0-1	---	---	3.5-6.0	---
	1-3	---	10-25	3.6-6.0	0
	3-22	---	5.0-30	3.6-6.0	0
	22-72	1.0-5.0	---	4.5-6.5	0
CpE:					
Colton, very stony	0-1	---	---	3.5-6.0	---
	1-3	---	10-25	3.6-6.0	0
	3-22	---	5.0-30	3.6-6.0	0
	22-72	1.0-5.0	---	4.5-6.5	0
Crk:					
Cook	0-7	10-45	---	5.1-7.3	0
	7-23	10-25	---	5.6-7.3	0-1
	23-72	10-25	---	6.6-8.4	0-5
Crr:					
Cornish	0-8	4.0-11	---	4.5-6.5	0
	8-28	1.0-4.0	---	4.5-6.5	0
	28-72	1.0-2.0	---	4.5-6.5	0
Cs:					
Covert	0-3	---	---	4.5-6.0	---
	3-6	1.0-5.0	---	4.5-7.3	0
	6-8	---	1.0-3.0	4.5-7.3	0
	8-30	1.0-3.0	---	4.5-7.3	0
	30-37	0.0-2.0	---	4.5-7.3	0
	37-72	0.0-2.0	---	5.1-7.3	0
CtsA:					
Covertfalls	0-8	12-26	---	4.5-6.0	0
	8-20	10-23	---	4.5-6.0	0
	20-26	10-23	---	5.6-7.3	0
	26-72	2.0-10	---	5.6-8.4	0-5

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
CtsB:					
Covertfalls----------	0-8	12-26	---	4.5-6.0	0
	8-20	10-23	---	4.5-6.0	0
	20-26	10-23	---	5.6-7.3	0
	26-72	2.0-10	---	5.6-8.4	0-5
CttB:					
Covertfalls, gravelly	0-8	12-26	---	4.5-6.0	0
	8-20	10-23	---	4.5-6.0	0
	20-26	10-23	---	5.6-7.3	0
	26-72	2.0-10	---	5.6-8.4	0-5
CvA:					
Coveytown------------	0-8	5.0-25	---	5.1-6.5	0
	8-28	5.0-15	---	5.6-7.3	0-1
	28-72	2.0-12	---	6.1-8.4	0-5
CvB:					
Coveytown------------	0-8	5.0-25	---	5.1-6.5	0
	8-28	5.0-15	---	5.6-7.3	0-1
	28-72	2.0-12	---	6.1-8.4	0-5
CwB:					
Coveytown, very stony	0-8	5.0-25	---	5.1-6.5	0
	8-28	5.0-15	---	5.6-7.3	0-1
	28-72	2.0-12	---	6.1-8.4	0-5
CxA:					
Croghan--------------	0-1	---	---	3.5-6.0	---
	1-3	---	5.0-20	3.6-6.0	0
	3-9	---	5.0-20	4.5-6.0	0
	9-33	---	15-40	4.5-6.0	0
	33-72	---	2.0-10	4.5-6.0	0
CxB:					
Croghan--------------	0-1	---	---	3.5-6.0	---
	1-3	---	5.0-20	3.6-6.0	0
	3-9	---	5.0-20	4.5-6.0	0
	9-33	---	15-40	4.5-6.0	0
	33-72	---	2.0-10	4.5-6.0	0
DeA:					
Deerfield------------	0-6	---	---	4.5-6.5	0
	6-31	---	---	4.5-6.5	0
	31-72	---	---	4.5-6.5	0
DeB:					
Deerfield------------	0-6	---	---	4.5-6.5	0
	6-31	---	---	4.5-6.5	0
	31-72	---	---	4.5-6.5	0
Df:					
Deinache-------------	0-9	10-20	---	5.1-7.3	0
	9-44	1.0-9.0	---	6.6-8.4	0
	44-72	2.0-11	---	6.6-8.4	0-5

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
FeB:					
Fahey, loamy substratum----------	0-9	---	10-35	4.5-5.5	0
	9-27	10-35	---	5.1-7.3	0
	27-45	5.0-20	---	5.6-7.3	0
	45-72	3.0-10	---	5.6-8.4	0-3
FhB:					
Fahey, very stony----	0-9	---	10-35	4.5-5.5	0
	9-27	10-35	---	5.1-7.3	0
	27-45	5.0-20	---	5.6-7.3	0
	45-72	3.0-10	---	5.6-8.4	0-3
FkB:					
Fernlake-------------	0-1	---	---	3.5-5.5	---
	1-2	---	10-20	3.5-5.5	0
	2-3	---	1.0-10	3.5-5.5	0
	3-33	---	1.0-5.0	4.5-6.0	0
	33-72	1.0-5.0	---	5.1-6.5	0
FlB:					
Fernlake, very bouldery------------	0-1	---	---	3.5-5.5	---
	1-2	---	10-20	3.5-5.5	0
	2-3	---	1.0-10	3.5-5.5	0
	3-33	---	1.0-5.0	4.5-6.0	0
	33-72	1.0-5.0	---	5.1-6.5	0
FlC:					
Fernlake, very bouldery------------	0-1	---	---	3.5-5.5	---
	1-2	---	10-20	3.5-5.5	0
	2-3	---	1.0-10	3.5-5.5	0
	3-33	---	1.0-5.0	4.5-6.0	0
	33-72	1.0-5.0	---	5.1-6.5	0
FlD:					
Fernlake, very bouldery------------	0-1	---	---	3.5-5.5	---
	1-2	---	10-20	3.5-5.5	0
	2-3	---	1.0-10	3.5-5.5	0
	3-33	---	1.0-5.0	4.5-6.0	0
	33-72	1.0-5.0	---	5.1-6.5	0
FlF:					
Fernlake, very bouldery------------	0-1	---	---	3.5-5.5	---
	1-2	---	10-20	3.5-5.5	0
	2-3	---	1.0-10	3.5-5.5	0
	3-33	---	1.0-5.0	4.5-6.0	0
	33-72	1.0-5.0	---	5.1-6.5	0
FmB:					
Flackville-----------	0-12	---	---	5.1-6.5	0
	12-26	---	---	5.1-7.3	0
	26-72	---	---	6.6-8.4	0-5
Fn:					
Fluvaquents, frequently flooded--	0-12	40-50	---	5.1-7.8	0-3
	12-72	3.0-25	---	5.1-7.8	0-5

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
Fn:					
Fluvaquents, frequently flooded--	0-12	40-50	---	5.1-7.8	0-3
	12-72	3.0-25	---	5.1-7.8	0-5
Udifluvents, frequently flooded--	0-12	---	---	4.5-7.3	0
	12-72	---	---	5.1-7.8	0
GfC:					
Gardenisle-----------	0-5	15-27	---	5.6-7.8	0-1
	5-9	8.0-18	---	5.6-7.8	0-1
	9-17	8.0-18	---	6.6-8.4	0-5
	17-24	2.0-8.0	---	6.6-8.4	0-10
	24-34	---	---	7.4-8.4	3-20
	34-42	---	---	---	---
Benson---------------	0-6	---	---	5.6-7.8	0-1
	6-14	---	---	6.1-7.8	0-5
	14-18	---	---	6.6-7.8	0-5
	18-26	---	---	---	---
Gl:					
Gougeville, undrained	0-6	20-40	---	5.1-6.5	0
	6-40	1.0-9.0	---	5.6-7.8	0
	40-72	1.0-9.0	---	5.6-7.8	0-2
GrA:					
Grattan--------------	0-3	---	---	4.5-6.5	---
	3-5	2.0-10	---	4.5-6.5	0
	5-41	1.0-6.0	---	4.5-6.5	0
	41-72	0.0-2.0	---	5.6-7.3	0
GrB:					
Grattan--------------	0-3	---	---	4.5-6.5	---
	3-5	2.0-10	---	4.5-6.5	0
	5-41	1.0-6.0	---	4.5-6.5	0
	41-72	0.0-2.0	---	5.6-7.3	0
GvB:					
Grenville------------	0-9	---	---	5.1-6.5	0
	9-17	---	---	5.6-7.3	0-3
	17-35	---	---	7.4-8.4	3-10
	35-72	---	---	7.4-8.4	3-10
GwC:					
Grenville, very stony	0-9	---	---	5.1-6.5	0
	9-17	---	---	5.6-7.3	0-3
	17-35	---	---	7.4-8.4	3-10
	35-72	---	---	7.4-8.4	3-10
Ha:					
Hailesboro-----------	0-9	8.0-12	---	5.6-7.3	0
	9-30	5.0-13	---	5.6-7.8	0-1
	30-72	5.0-10	---	6.6-8.4	0-5
HeB:					
Hermon---------------	0-6	---	3.0-8.0	3.6-5.5	0
	6-10	---	2.0-4.0	3.6-6.0	0
	10-37	---	1.0-6.0	3.6-6.0	0
	37-72	0.0-1.0	---	5.1-6.0	0

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
HeC:					
Hermon---------------	0-6	---	3.0-8.0	3.6-5.5	0
	6-10	---	2.0-4.0	3.6-6.0	0
	10-37	---	1.0-6.0	3.6-6.0	0
	37-72	0.0-1.0	---	5.1-6.0	0
HfC:					
Hermon, very bouldery	0-6	---	3.0-8.0	3.6-5.5	0
	6-10	---	2.0-4.0	3.6-6.0	0
	10-37	---	1.0-6.0	3.6-6.0	0
	37-72	0.0-1.0	---	5.1-6.0	0
HfD:					
Hermon, very bouldery	0-6	---	3.0-8.0	3.6-5.5	0
	6-10	---	2.0-4.0	3.6-6.0	0
	10-37	---	1.0-6.0	3.6-6.0	0
	37-72	0.0-1.0	---	5.1-6.0	0
HgC:					
Hermon, very bouldery	0-6	---	3.0-8.0	3.6-5.5	0
	6-10	---	2.0-4.0	3.6-6.0	0
	10-37	---	1.0-6.0	3.6-6.0	0
	37-72	0.0-1.0	---	5.1-6.0	0
Adirondack, very bouldery------------	0-5	---	15-40	3.6-5.5	0
	5-22	---	20-60	3.6-5.5	0
	22-72	5.0-15	---	5.1-6.0	0
HlB:					
Heuvelton------------	0-6	---	---	5.1-7.3	0
	6-10	---	---	5.1-7.3	0
	10-39	---	---	5.6-7.8	0-5
	39-72	---	---	6.6-8.4	3-10
HlD:					
Heuvelton------------	0-6	---	---	5.1-7.3	0
	6-10	---	---	5.1-7.3	0
	10-39	---	---	5.6-7.8	0-5
	39-72	---	---	6.6-8.4	3-10
HoA:					
Hogansburg-----------	0-10	17-25	---	5.1-7.3	0
	10-19	10-20	---	5.1-7.8	0-5
	19-35	10-20	---	5.1-8.4	3-10
	35-72	8.0-25	---	7.4-8.4	3-10
HoB:					
Hogansburg-----------	0-10	17-25	---	5.1-7.3	0
	10-19	10-20	---	5.1-7.8	0-5
	19-35	10-20	---	5.1-8.4	3-10
	35-72	8.0-25	---	7.4-8.4	3-10
HrB:					
Hogansburg, very stony---------------	0-10	17-25	---	5.1-7.3	0
	10-19	10-20	---	5.1-7.8	0-5
	19-35	10-20	---	5.1-8.4	3-10
	35-72	8.0-25	---	7.4-8.4	3-10

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
InB:					
Irona----------------	0-5	12-25	---	5.1-6.5	0
	5-13	6.0-16	---	5.1-6.5	0
	13-18	3.0-9.0	---	5.1-6.5	0
	18-26	---	---	---	0
Conic----------------	0-1	---	---	3.5-6.0	---
	1-4	---	---	3.5-6.0	0
	4-23	---	5.0-14	3.5-6.0	0
	23-37	---	2.0-7.0	4.5-6.0	0
	37-45	---	---	---	---
Jn:					
Junius---------------	0-9	---	---	5.6-7.3	0
	9-46	---	---	6.1-7.8	0-2
	46-72	---	---	6.6-8.4	1-5
KhB:					
Kalurah--------------	0-8	17-25	---	5.6-7.3	0
	8-45	5.0-11	---	6.1-7.3	0
	45-72	10-25	---	6.6-8.4	0-5
KlB:					
Kalurah, very stony--	0-8	17-25	---	5.6-7.3	0
	8-45	5.0-11	---	6.1-7.3	0
	45-72	10-25	---	6.6-8.4	0-5
Kr:					
Kingsbury------------	0-8	30-40	---	5.1-7.8	0
	8-11	---	---	5.1-7.8	0
	11-32	26-37	---	5.1-7.8	0-2
	32-72	20-30	---	7.0-8.4	1-10
Rhinebeck------------	0-8	15-32	---	5.1-7.3	0
	8-31	20-35	---	5.1-7.8	0
	31-51	15-30	---	6.1-8.4	0-2
	51-72	15-30	---	6.1-8.4	0-10
Ld:					
Lovewell, stratified substratum----------	0-11	4.0-11	---	4.5-6.5	0
	11-30	1.0-5.0	---	4.5-6.5	0
	30-50	1.0-3.0	---	4.5-6.5	0
	50-75	1.0-2.0	---	4.5-6.5	0
Le:					
Loxley---------------	0-16	---	50-100	3.5-4.4	0
	16-72	---	50-120	3.5-4.4	0
LtF:					
Lyman, very bouldery-	0-3	---	---	3.5-6.0	0
	3-6	---	---	3.5-6.0	0
	6-17	---	---	3.5-6.0	0
	17-25	---	---	---	---
Tunbridge, very bouldery------------	0-4	---	6.0-12	3.6-6.0	0
	4-26	---	5.0-16	3.6-6.0	0
	26-34	---	---	---	---
Rock Outcrop---------	0-60	---	---	---	---

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
Lv:					
Lyonmounten, undrained-----------	0-9	15-30	---	5.1-6.5	0
	9-41	3.0-17	---	5.1-6.5	0
	41-72	3.0-9.0	---	5.6-8.4	0-5
Ly:					
Lyonmounten, very stony---------------	0-9	15-30	---	5.1-6.5	0
	9-41	3.0-17	---	5.1-6.5	0
	41-72	3.0-9.0	---	5.6-8.4	0-5
MaB:					
Madrid---------------	0-6	---	---	5.1-7.3	0
	6-28	---	---	5.1-7.3	0
	28-42	---	---	5.6-7.3	0
	42-72	---	---	6.6-8.4	0-5
MaC:					
Madrid---------------	0-6	---	---	5.1-7.3	0
	6-28	---	---	5.1-7.3	0
	28-42	---	---	5.6-7.3	0
	42-72	---	---	6.6-8.4	0-5
MeA:					
Malone---------------	0-9	10-25	---	5.6-6.5	0
	9-30	15-40	---	6.1-7.3	0-1
	30-72	15-40	---	6.6-8.4	1-10
MeB:					
Malone---------------	0-9	10-25	---	5.6-6.5	0
	9-30	15-40	---	6.1-7.3	0
	30-72	15-40	---	6.6-8.4	1-10
MfB:					
Malone, very stony---	0-9	10-25	---	5.6-6.5	0
	9-30	15-40	---	6.1-7.3	0
	30-72	15-40	---	6.6-8.4	1-10
Mk:					
Markey---------------	0-27	150-200	---	5.6-7.8	0
	27-72	1.0-3.0	---	5.6-8.4	0-2
Mn:					
Massena--------------	0-9	10-20	---	5.6-7.3	0
	9-32	3.0-15	---	5.6-7.3	0
	32-72	3.0-15	---	6.6-8.4	1-10
Mp:					
Medomak, stratified substratum----------	0-1	---	---	4.5-6.5	0
	1-13	---	6.0-10	4.5-6.5	0
	13-26	---	5.0-11	4.5-6.5	0
	26-47	4.0-10	---	5.6-7.3	0
	47-72	0.0-2.0	---	5.6-7.3	0
Ms:					
Mino-----------------	0-9	---	---	5.1-6.5	0
	9-24	---	---	5.6-7.3	0
	24-78	---	---	6.1-8.4	0-5

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
MtB:					
Monadnock------------	0-2	---	---	3.6-6.0	0
	2-36	---	---	3.6-6.0	0
	36-72	---	---	3.6-6.0	0
MtC:					
Monadnock------------	0-2	---	---	3.6-6.0	0
	2-36	---	---	3.6-6.0	0
	36-72	---	---	3.6-6.0	0
MuC:					
Monadnock, very bouldery-----------	0-2	---	---	3.6-6.0	0
	2-36	---	---	3.6-6.0	0
	36-72	---	---	3.6-6.0	0
MuD:					
Monadnock, very bouldery-----------	0-2	---	---	3.6-6.0	0
	2-36	---	---	3.6-6.0	0
	36-72	---	---	3.6-6.0	0
MuF:					
Monadnock, very bouldery-----------	0-2	---	---	3.6-6.0	0
	2-36	---	---	3.6-6.0	0
	36-72	---	---	3.6-6.0	0
MvA:					
Mooers---------------	0-8	9.0-15	---	5.1-6.5	0
	8-47	3.0-10	---	5.6-7.8	0
	47-72	2.0-7.0	---	5.6-7.8	0-5
MvB:					
Mooers---------------	0-8	9.0-15	---	5.1-6.5	0
	8-47	3.0-10	---	5.6-7.8	0
	47-72	2.0-7.0	---	5.6-7.8	0-5
MwA:					
Muskellunge----------	0-9	---	---	5.1-7.3	0
	9-38	---	---	5.1-7.8	0-5
	38-72	---	---	6.6-8.4	3-10
MwB:					
Muskellunge----------	0-9	---	---	5.1-7.3	0
	9-38	---	---	5.1-7.8	0-5
	38-72	---	---	6.6-8.4	3-10
NeC:					
Neckrock-------------	0-9	15-25	---	5.6-7.8	0
	9-17	8.0-18	---	5.6-7.8	0
	17-27	10-20	---	5.6-8.4	0-3
	27-32	4.0-11	---	6.6-8.4	3-10
	32-40	---	---	---	0
Summerville----------	0-5	5.0-15	---	6.1-8.4	0-5
	5-12	2.0-15	---	6.1-8.4	0-10
	12-20	---	---	---	---

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
NoB:					
Nicholville----------	0-9	---	---	3.6-6.0	0
	9-20	---	---	4.5-6.0	0
	20-34	---	---	4.5-6.5	0
	34-72	---	---	4.5-6.5	0
NrA:					
Northway-------------	0-8	10-30	---	5.1-7.3	0
	8-32	2.0-40	---	5.1-7.3	0-1
	32-72	5.0-15	---	6.1-8.4	0-10
NrB:					
Northway-------------	0-8	10-30	---	5.1-7.3	0
	8-32	2.0-40	---	5.1-7.3	0-1
	32-72	5.0-15	---	6.1-8.4	0-10
OcA:					
Occur----------------	0-6	15-28	---	5.1-7.3	0
	6-29	2.0-23	---	5.1-7.3	0-1
	29-72	2.0-10	---	5.6-8.4	0-10
OcB:					
Occur----------------	0-6	15-28	---	5.1-7.3	0
	6-29	2.0-23	---	5.1-7.3	0-1
	29-72	2.0-10	---	5.6-8.4	0-10
OgB:					
Ogdensburg-----------	0-9	20-60	---	5.6-7.3	0
	9-26	4.0-15	---	6.1-7.8	0-5
	26-38	3.0-7.0	---	6.6-8.4	2-10
	38-46	---	---	---	---
PeA:					
Peasleeville---------	0-11	15-30	---	5.1-6.5	0
	11-42	5.0-17	---	5.1-6.5	0
	42-72	3.0-12	---	5.6-7.3	0-2
PeB:					
Peasleeville---------	0-11	15-30	---	5.1-6.5	0
	11-42	5.0-17	---	5.1-6.5	0
	42-72	3.0-12	---	5.6-7.3	0-2
PfB:					
Peasleeville, very stony---------------	0-11	15-30	---	5.1-6.5	0
	11-42	5.0-17	---	5.1-6.5	0
	42-72	3.0-12	---	5.6-7.3	0-2
Pg:					
Pinconning, undrained	0-9	10-20	---	5.6-7.8	0
	9-36	1.0-6.0	---	6.1-7.8	0-3
	36-72	12-18	---	7.4-8.4	3-10
Ph:					
Pipestone------------	0-7	2.0-10	---	3.6-7.3	0
	7-19	1.0-2.0	---	3.6-6.0	0
	19-26	---	2.0-10	4.5-7.3	0
	26-72	1.0-2.0	---	4.5-7.3	0

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
Pn:					
Pits, Gravel---------	0-6	5.0-10	---	4.5-7.3	0-1
	6-72	---	---	4.5-7.3	---
Po:					
Pits, Quarry---------	0-72	---	---	---	---
Pp:					
Pits, Sand-----------	0-10	---	---	4.5-6.5	---
	10-72	---	---	4.5-6.5	---
PtA:					
Plainfield-----------	0-8	2.0-10	---	4.5-7.3	0
	8-23	0.0-7.0	---	4.5-7.3	0
	23-72	0.0-1.0	---	4.5-7.3	0
PtB:					
Plainfield-----------	0-8	2.0-10	---	4.5-7.3	0
	8-23	0.0-7.0	---	4.5-7.3	0
	23-72	0.0-1.0	---	4.5-7.3	0
PtC:					
Plainfield-----------	0-8	2.0-10	---	4.5-7.3	0
	8-23	0.0-7.0	---	4.5-7.3	0
	23-72	0.0-1.0	---	4.5-7.3	0
PvF:					
Plainfield-----------	0-8	2.0-10	---	4.5-7.3	0
	8-23	0.0-7.0	---	4.5-7.3	0
	23-72	0.0-1.0	---	4.5-7.3	0
Grattan--------------	0-3	---	---	4.5-6.5	0
	3-11	2.0-10	---	4.5-6.5	0
	11-41	1.0-6.0	---	4.5-6.5	0
	41-72	0.0-2.0	---	5.6-7.3	0
RoB:					
Rock Outcrop---------	0-72	---	---	---	---
Ricker---------------	0-3	---	---	3.5-4.4	---
	3-5	---	---	3.5-4.4	---
	5-6	---	---	3.5-4.4	---
	6-7	---	---	3.5-5.0	0
	7-15	---	---	---	---
Rr:					
Roundabout-----------	0-9	2.0-10	---	4.5-6.5	0
	9-31	1.0-4.0	---	4.5-6.5	0
	31-72	5.0-8.0	---	5.6-8.4	0-5
Ry:					
Runeberg-------------	0-9	25-55	---	6.1-7.3	0
	9-22	5.0-20	---	6.1-7.8	0-3
	22-72	3.0-12	---	7.4-8.4	3-10
Sb:					
Sabattis, undrained; very bouldery-------	0-8	---	---	4.5-6.5	---
	8-11	20-45	---	4.5-6.5	0
	11-26	4.0-18	---	4.5-7.3	0
	26-72	1.0-9.0	---	5.1-7.8	0

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
Se:					
Saprists, ponded-----	0-7	90-160	---	4.5-7.3	0
	7-30	90-160	---	4.5-7.3	0
	30-72	---	4.0-17	4.5-7.3	0-2
Aquents, ponded------	0-9	15-110	---	4.5-7.3	0
	9-72	10-60	---	4.5-8.4	0-10
ShB:					
Schroon--------------	0-8	---	10-25	4.5-6.0	0
	8-23	---	5.0-20	4.5-6.0	0
	23-72	5.0-10	---	5.1-6.5	0
ShC:					
Schroon--------------	0-8	---	10-25	4.5-6.0	0
	8-23	---	5.0-20	4.5-6.0	0
	23-72	5.0-10	---	5.1-6.5	0
SkB:					
Schroon, very stony--	0-8	---	10-25	4.5-6.0	0
	8-23	---	5.0-20	4.5-6.0	0
	23-72	5.0-10	---	5.1-6.5	0
Sn:					
Sciota---------------	0-9	9.0-15	---	5.6-7.3	0
	9-37	2.0-8.0	---	6.1-7.8	0-2
	37-72	1.0-5.0	---	6.6-8.4	0-5
So:					
Shaker---------------	0-9	---	---	5.1-7.3	0
	9-25	---	---	5.1-7.3	0
	25-72	---	---	5.6-7.8	0-3
SpB:					
Sheddenbrook---------	0-1	---	---	4.5-6.5	---
	1-7	12-26	---	4.5-6.5	0
	7-27	2.0-23	---	4.5-6.5	0
	27-30	1.0-5.0	---	4.5-6.5	0
	30-38	---	---	---	0
SrB:					
Skerry---------------	0-5	---	---	4.5-6.5	0
	5-24	---	---	4.5-6.5	0
	24-72	---	---	4.5-7.3	0
SsB:					
Skerry, very bouldery	0-5	---	---	4.5-6.5	---
	5-24	---	---	4.5-6.5	---
	24-72	---	---	4.5-7.3	---
SsC:					
Skerry, very bouldery	0-5	---	---	4.5-6.5	---
	5-24	---	---	4.5-6.5	---
	24-72	---	---	4.5-7.3	---
StD:					
Success, very bouldery------------	0-8	---	15-30	3.6-6.0	0
	8-18	---	5.0-20	3.6-6.0	0
	18-37	---	2.0-10	3.6-6.0	0
	37-72	0.0-5.0	---	4.5-6.5	0

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
SwB:					
Sunapee--------------	0-7	---	---	3.6-5.5	---
	7-39	---	---	3.6-5.5	---
	39-72	---	---	3.6-6.0	---
SxB:					
Sunapee, very bouldery------------	0-7	---	---	3.6-5.5	0
	7-39	---	---	3.6-5.5	0
	39-72	---	---	3.6-6.0	0
Sz:					
Swanton--------------	0-9	5.0-12	---	5.1-7.3	0
	9-31	4.0-16	---	5.1-7.3	0
	31-72	3.0-15	---	5.6-8.4	0-3
TcB:					
Topknot--------------	0-7	15-30	---	5.1-7.3	0
	7-14	4.0-17	---	5.1-7.3	0
	14-22	---	---	---	0
Chazy----------------	0-10	12-25	---	5.1-6.5	0
	10-28	6.0-16	---	5.6-7.3	0
	28-36	---	---	---	---
TnC:					
Tunbridge, very bouldery------------	0-4	---	6.0-12	3.6-6.0	0
	4-26	---	5.0-16	3.6-6.0	0
	26-34	---	---	---	---
Lyman, very bouldery-	0-3	---	---	3.5-6.0	0
	3-6	---	---	3.5-6.0	0
	6-17	---	---	3.5-6.0	0
	17-25	---	---	---	---
TnE:					
Tunbridge, very bouldery------------	0-4	---	6.0-12	3.6-6.0	0
	4-26	---	5.0-16	3.6-6.0	0
	26-34	---	---	---	---
Lyman, very bouldery-	0-3	---	---	3.5-6.0	0
	3-6	---	---	3.5-6.0	0
	6-17	---	---	3.5-6.0	0
	17-25	---	---	---	---
Ud:					
Udipsamments, smoothed------------	0-6	---	---	4.5-6.0	0
	6-72	---	---	4.5-6.5	0
Psammaquents, smoothed------------	0-6	---	---	4.5-6.0	---
	6-72	---	---	4.5-6.5	---
Ue:					
Udipsamments, Mine Spoil, non-acid-----	0-72	---	---	4.5-6.5	0

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
Uf:					
Udorthents, Refuse Substratum----------	0-6	---	---	4.5-7.8	0
	6-72	---	---	3.5-8.4	---
Ug:					
Udorthents, smoothed-	0-4	---	---	4.5-7.3	0
	4-72	---	---	5.1-7.8	0-3
Uh:					
Udorthents, wet substratum----------	0-4	---	---	4.5-7.3	0
	4-72	---	---	5.1-7.8	0-3
Un:					
Urban Land-----------	0-6	---	---	---	---
UpA:					
Urban Land-----------	0-6	---	---	---	---
Plainfield-----------	0-8	2.0-10	---	4.5-7.3	0
	8-23	0.0-7.0	---	4.5-7.3	0
	23-72	0.0-1.0	---	4.5-7.3	0
UpB:					
Urban Land-----------	0-6	---	---	---	---
Plainfield-----------	0-8	2.0-10	---	4.5-7.3	0
	8-23	0.0-7.0	---	4.5-7.3	0
	23-72	0.0-1.0	---	4.5-7.3	0
W:					
Water, areas < 40 acres---------------	---	---	---	---	---
WdB:					
Waddington-----------	0-9	---	---	6.1-7.3	0
	9-26	---	---	6.6-7.8	0
	26-31	---	---	6.6-8.4	0-5
	31-72	---	---	7.4-8.4	3-10
Wn:					
Wainola, high ppt.---	0-1	---	---	4.5-6.5	---
	1-7	5.0-15	---	4.5-6.5	0
	7-22	---	1.0-5.0	4.5-6.5	0
	22-34	1.0-5.0	---	4.5-6.5	0
	34-72	1.0-5.0	---	4.5-6.5	0
WsB:					
Wallace--------------	0-8	---	2.0-5.0	4.5-6.0	0
	8-33	---	1.0-4.0	4.5-6.5	0
	33-72	1.0-2.0	---	5.6-6.5	0
WsC:					
Wallace--------------	0-8	---	2.0-5.0	4.5-6.0	0
	8-33	---	1.0-4.0	4.5-6.5	0
	33-72	1.0-2.0	---	5.6-6.5	0

Table 16.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
WsE:					
Wallace--------------	0-8	---	2.0-5.0	4.5-6.0	0
	8-33	---	1.0-4.0	4.5-6.5	0
	33-72	1.0-2.0	---	5.6-6.5	0
Wu:					
Wonsqueak------------	0-7	---	20-50	4.0-6.5	0
	7-31	20-50	---	4.5-6.5	0
	31-72	1.0-3.0	---	5.1-7.3	0

Table 17.—Water Features

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
15:									
Loxley, undrained, high ppt.---------------------	A/D								
		January	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		February	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		March	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		April	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		May	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		June	0.0-1.0	>6.0	0.0-1.0	Long	Occasional	---	None
		July	0.0-1.0	>6.0	0.0-1.0	Brief	Occasional	---	None
		November	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		December	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
Beseman, undrained--------	A/D								
		January	0.0	>6.0	0.0-2.0	Long	Frequent	---	None
		February	0.0	>6.0	0.0-2.0	Long	Frequent	---	None
		March	0.0	>6.0	0.0-2.0	Very long	Frequent	---	None
		April	0.0	>6.0	0.0-2.0	Very long	Frequent	---	None
		May	0.0	>6.0	0.0-2.0	Long	Frequent	---	None
		June	0.0-0.5	>6.0	---	---	None	---	None
		July	0.0-1.0	>6.0	---	---	None	---	None
		November	0.0	>6.0	0.0-2.0	Long	Frequent	---	None
		December	0.0	>6.0	0.0-2.0	Long	Frequent	---	None
17:									
Beseman, undrained--------	A/D								
		January	0.0	>6.0	0.0-2.0	Long	Frequent	---	None
		February	0.0	>6.0	0.0-2.0	Long	Frequent	---	None
		March	0.0	>6.0	0.0-2.0	Very long	Frequent	---	None
		April	0.0	>6.0	0.0-2.0	Very long	Frequent	---	None
		May	0.0	>6.0	0.0-2.0	Long	Frequent	---	None
		June	0.0-0.5	>6.0	---	---	None	---	None
		July	0.0-1.0	>6.0	---	---	None	---	None
		November	0.0	>6.0	0.0-2.0	Long	Frequent	---	None
		December	0.0	>6.0	0.0-2.0	Long	Frequent	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
Rumney	C								
		January	0.0-1.5	>6.0	---	---	None	Brief	Occasional
		February	0.0-1.5	>6.0	---	---	None	Brief	Occasional
		March	0.0-1.5	>6.0	---	---	None	Brief	Occasional
		April	0.0-1.5	>6.0	---	---	None	Brief	Occasional
		May	0.0-1.5	>6.0	---	---	None	Brief	Occasional
		October	---	---	---	---	None	Brief	Occasional
		November	0.0-1.5	>6.0	---	---	None	Brief	Occasional
		December	0.0-1.5	>6.0	---	---	None	Brief	Occasional
Loxley, undrained	A/D								
		January	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		February	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		March	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		April	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		May	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		June	0.0-1.0	>6.0	0.0-1.0	Long	Occasional	---	None
		July	0.0-1.0	>6.0	0.0-1.0	Brief	Occasional	---	None
		November	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		December	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
367:									
Searsport	D								
		January	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		February	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		March	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		April	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		May	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		June	0.0-1.0	>6.0	---	---	None	---	None
		July	0.0-1.0	>6.0	---	---	None	---	None
		September	0.0-1.0	>6.0	---	---	None	---	None
		October	0.0-1.0	>6.0	---	---	None	---	None
		November	0.0-1.0	>6.0	---	---	None	---	None
		December	0.0	>6.0	---	---	None	---	None
Borosaprists	A/D								
		January	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		February	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		March	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		April	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		May	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		June	0.0	>6.0	0.0-1.0	Brief	Frequent	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
367:									
Borosaprists	A/D								
		July	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	---	None
		September	0.0-0.5	>6.0	---	---	None	---	None
		October	0.0-0.5	>6.0	0.0-1.0	Brief	Occasional	---	None
		November	0.0-0.5	>6.0	0.0-1.0	Brief	Occasional	---	None
		December	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
Naumburg	C								
		January	0.5-1.5	>6.0	---	---	None	---	None
		February	0.5-1.5	>6.0	---	---	None	---	None
		March	0.5-1.5	>6.0	---	---	None	---	None
		April	0.5-1.5	>6.0	---	---	None	---	None
		May	0.5-1.5	>6.0	---	---	None	---	None
		December	0.5-1.5	>6.0	---	---	None	---	None
375C:									
Colton	A								
		Jan-Dec	---	---	---	---	None	---	None
Adams	A								
		Jan-Dec	---	---	---	---	None	---	None
375F:									
Colton	A								
		Jan-Dec	---	---	---	---	None	---	None
Adams	A								
		Jan-Dec	---	---	---	---	None	---	None
651C:									
Monadnock, very bouldery	B								
		Jan-Dec	---	---	---	---	None	---	None
Tunbridge, very bouldery	C								
		Jan-Dec	---	---	---	---	None	---	None
Sabattis, undrained; very bouldery	D								
		January	0.0-1.0	>6.0	---	---	None	---	None
		February	0.0-1.0	>6.0	---	---	None	---	None
		March	0.0-1.0	>6.0	---	---	None	---	None
		April	0.0-1.0	>6.0	---	---	None	---	None
		May	0.0-1.0	>6.0	---	---	None	---	None
		November	0.0-1.0	>6.0	---	---	None	---	None
		December	0.0-1.0	>6.0	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
651D:									
Monadnock, very bouldery--	B								
		Jan-Dec	---	---	---	---	None	---	None
Tunbridge, very bouldery--	C								
		Jan-Dec	---	---	---	---	None	---	None
653C:									
Monadnock, very bouldery--	B								
		Jan-Dec	---	---	---	---	None	---	None
654C:									
Monadnock, very bouldery--	B								
		Jan-Dec	---	---	---	---	None	---	None
Sabattis, very bouldery---	D								
		January	0.0-1.0	>6.0	---	---	None	---	None
		February	0.0-1.0	>6.0	---	---	None	---	None
		March	0.0-1.0	>6.0	---	---	None	---	None
		April	0.0-1.0	>6.0	---	---	None	---	None
		May	0.0-1.0	>6.0	---	---	None	---	None
		November	0.0-1.0	>6.0	---	---	None	---	None
		December	0.0-1.0	>6.0	---	---	None	---	None
655B:									
Sunapee, very bouldery----	B								
		January	1.5-3.0	>6.0	---	---	None	---	None
		February	1.5-3.0	>6.0	---	---	None	---	None
		March	1.5-3.0	>6.0	---	---	None	---	None
		April	1.5-3.0	>6.0	---	---	None	---	None
		May	1.5-3.0	>6.0	---	---	None	---	None
		November	1.5-3.0	>6.0	---	---	None	---	None
		December	1.5-3.0	>6.0	---	---	None	---	None
Monadnock, very bouldery--	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
661C:									
Hermon, very bouldery-----	A								
		Jan-Dec	---	---	---	---	None	---	None
661D:									
Hermon, very bouldery-----	A								
		Jan-Dec	---	---	---	---	None	---	None
708B:									
Adirondack, very bouldery-	D								
		January	1.0-1.5	1.2-2.5	---	---	None	---	None
		February	1.0-1.5	1.2-2.5	---	---	None	---	None
		March	1.0-1.5	1.2-2.5	---	---	None	---	None
		April	1.0-1.5	1.2-2.5	---	---	None	---	None
		May	1.0-1.5	1.2-2.5	---	---	None	---	None
		November	1.0-1.5	1.2-2.5	---	---	None	---	None
		December	1.0-1.5	1.2-2.5	---	---	None	---	None
Sabattis, undrained; very bouldery----------------	D								
		January	0.0-1.0	>6.0	---	---	None	---	None
		February	0.0-1.0	>6.0	---	---	None	---	None
		March	0.0-1.0	>6.0	---	---	None	---	None
		April	0.0-1.0	>6.0	---	---	None	---	None
		May	0.0-1.0	>6.0	---	---	None	---	None
		November	0.0-1.0	>6.0	---	---	None	---	None
		December	0.0-1.0	>6.0	---	---	None	---	None
Tughill, very bouldery----	D								
		January	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		February	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		March	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		April	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		May	0.0	>6.0	0.0-1.0	Long	Occasional	---	None
		June	0.0	>6.0	0.0-1.0	Long	Occasional	---	None
		November	0.0-0.5	>6.0	0.0-1.0	Long	Occasional	---	None
		December	0.0-0.5	>6.0	0.0-1.0	Long	Occasional	---	None
721C:									
Becket, very bouldery-----	C								
		March	2.0-3.5	2.0-3.5	---	---	None	---	None
		April	2.0-3.5	2.0-3.5	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
721C:									
Tunbridge, very bouldery--	C								
		Jan-Dec	---	---	---	---	None	---	None
Skerry, very bouldery-----	C								
		January	1.5-2.5	1.5-3.0	---	---	None	---	None
		February	1.5-2.5	1.5-3.0	---	---	None	---	None
		March	1.5-2.5	1.5-3.0	---	---	None	---	None
		April	1.5-2.5	1.5-3.0	---	---	None	---	None
		May	1.5-2.5	1.5-3.0	---	---	None	---	None
		November	1.5-2.5	1.5-3.0	---	---	None	---	None
		December	1.5-2.5	1.5-3.0	---	---	None	---	None
721D:									
Becket, very bouldery-----	C								
		March	2.0-3.5	2.0-3.5	---	---	None	---	None
		April	2.0-3.5	2.0-3.5	---	---	None	---	None
Tunbridge, very bouldery--	C								
		Jan-Dec	---	---	---	---	None	---	None
723C:									
Becket, very bouldery-----	C								
		March	2.0-3.5	2.0-3.5	---	---	None	---	None
		April	2.0-3.5	2.0-3.5	---	---	None	---	None
723D:									
Becket, very bouldery-----	C								
		March	2.0-3.5	2.0-3.5	---	---	None	---	None
		April	2.0-3.5	2.0-3.5	---	---	None	---	None
725B:									
Skerry, very bouldery-----	C								
		January	1.5-2.5	1.5-3.0	---	---	None	---	None
		February	1.5-2.5	1.5-3.0	---	---	None	---	None
		March	1.5-2.5	1.5-3.0	---	---	None	---	None
		April	1.5-2.5	1.5-3.0	---	---	None	---	None
		May	1.5-2.5	1.5-3.0	---	---	None	---	None
		November	1.5-2.5	1.5-3.0	---	---	None	---	None
		December	1.5-2.5	1.5-3.0	---	---	None	---	None
		Jan-Dec	---	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
725B:									
Becket, very bouldery-----	C								
		March	2.0-3.5	2.0-3.5	---	---	None	---	None
		April	2.0-3.5	2.0-3.5	---	---	None	---	None
727B:									
Skerry, very bouldery-----	C								
		January	1.5-2.5	1.5-3.0	---	---	None	---	None
		February	1.5-2.5	1.5-3.0	---	---	None	---	None
		March	1.5-2.5	1.5-3.0	---	---	None	---	None
		April	1.5-2.5	1.5-3.0	---	---	None	---	None
		May	1.5-2.5	1.5-3.0	---	---	None	---	None
		November	1.5-2.5	1.5-3.0	---	---	None	---	None
		December	1.5-2.5	1.5-3.0	---	---	None	---	None
Adirondack, very bouldery-	D								
		January	1.0-1.5	1.2-2.5	---	---	None	---	None
		February	1.0-1.5	1.2-2.5	---	---	None	---	None
		March	1.0-1.5	1.2-2.5	---	---	None	---	None
		April	1.0-1.5	1.2-2.5	---	---	None	---	None
		May	1.0-1.5	1.2-2.5	---	---	None	---	None
		November	1.0-1.5	1.2-2.5	---	---	None	---	None
		December	1.0-1.5	1.2-2.5	---	---	None	---	None
831C:									
Tunbridge, very bouldery--	C								
		Jan-Dec	---	---	---	---	None	---	None
Lyman, very bouldery------	C/D								
831D:									
Tunbridge, very bouldery--	C								
		Jan-Dec	---	---	---	---	None	---	None
Lyman, very bouldery------	C/D								
		Jan-Dec	---	---	---	---	None	---	None
831F:									
Tunbridge, very bouldery--	C								
		Jan-Dec	---	---	---	---	None	---	None
Lyman, very bouldery------	C/D								
		Jan-Dec	---	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
861F:									
Lyman, very bouldery------	C/D								
		Jan-Dec	---	---	---	---	None	---	None
Ricker, very bouldery-----	A								
		Jan-Dec	---	---	---	---	None	---	None
931C:									
Mundalite, very bouldery--	C								
		March	2.5-3.5	2.5-3.5	---	---	None	---	None
		April	2.5-3.5	2.5-3.5	---	---	None	---	None
Rawsonville, very bouldery	C								
		Jan-Dec	---	---	---	---	None	---	None
Worden, very bouldery-----	C								
		January	1.0-1.5	1.5-2.5	---	---	None	---	None
		February	1.0-1.5	1.5-2.5	---	---	None	---	None
		March	1.0-1.5	1.5-2.5	---	---	None	---	None
		April	1.0-1.5	1.5-2.5	---	---	None	---	None
		May	1.0-1.5	1.5-2.5	---	---	None	---	None
		September	1.0-1.5	1.5-2.5	---	---	None	---	None
		October	1.0-1.5	1.5-2.5	---	---	None	---	None
		November	1.0-1.5	1.5-2.5	---	---	None	---	None
		December	1.0-1.5	1.5-2.5	---	---	None	---	None
931D:									
Mundalite, very bouldery--	C								
		March	2.5-3.5	2.5-3.5	---	---	None	---	None
		April	2.5-3.5	2.5-3.5	---	---	None	---	None
Rawsonville, very bouldery	C								
		Jan-Dec	---	---	---	---	None	---	None
933C:									
Mundalite, very bouldery--	C								
		March	2.5-3.5	2.5-3.5	---	---	None	---	None
		April	2.5-3.5	2.5-3.5	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
933C:									
Worden, very bouldery-----	C								
		January	1.0-1.5	1.5-2.5	---	---	None	---	None
		February	1.0-1.5	1.5-2.5	---	---	None	---	None
		March	1.0-1.5	1.5-2.5	---	---	None	---	None
		April	1.0-1.5	1.5-2.5	---	---	None	---	None
		May	1.0-1.5	1.5-2.5	---	---	None	---	None
		September	1.0-1.5	1.5-2.5	---	---	None	---	None
		October	1.0-1.5	1.5-2.5	---	---	None	---	None
		November	1.0-1.5	1.5-2.5	---	---	None	---	None
		December	1.0-1.5	1.5-2.5	---	---	None	---	None
941C:									
Rawsonville, very bouldery	C								
		Jan-Dec	---	---	---	---	None	---	None
Hogback, very bouldery----	C								
		Jan-Dec	---	---	---	---	None	---	None
941D:									
Rawsonville, very bouldery	C								
		Jan-Dec	---	---	---	---	None	---	None
Hogback, very bouldery----	C								
		Jan-Dec	---	---	---	---	None	---	None
941F:									
Rawsonville, very bouldery	C								
		Jan-Dec	---	---	---	---	None	---	None
Hogback, very bouldery----	C								
		Jan-Dec	---	---	---	---	None	---	None
943C:									
Rawsonville, very bouldery	C								
		Jan-Dec	---	---	---	---	None	---	None
Borosaprists--------------	A/D								
		January	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		February	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		March	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		April	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		May	0.0	>6.0	0.0-1.0	Long	Frequent	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
943C:									
Borosaprists	A/D								
		June	0.0	>6.0	0.0-1.0	Brief	Frequent	---	None
		July	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	---	None
		September	0.0-0.5	>6.0	---	---	None	---	None
		October	0.0-0.5	>6.0	0.0-1.0	Brief	Occasional	---	None
		November	0.0-0.5	>6.0	0.0-1.0	Brief	Occasional	---	None
		December	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
Ricker, very bouldery	A								
		Jan-Dec	---	---	---	---	None	---	None
945F:									
Hogback, very bouldery	C								
		Jan-Dec	---	---	---	---	None	---	None
Ricker, very bouldery	A								
		Jan-Dec	---	---	---	---	None	---	None
949F:									
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
Ricker, very bouldery	A								
		Jan-Dec	---	---	---	---	None	---	None
Hogback, very bouldery	C								
		Jan-Dec	---	---	---	---	None	---	None
991D:									
Glebe, very bouldery	C								
		Jan-Dec	---	---	---	---	None	---	None
Skylight, very bouldery	D								
		Jan-Dec	---	---	---	---	None	---	None
997F:									
Ricker, very bouldery	A								
		Jan-Dec	---	---	---	---	None	---	None
Skylight, very bouldery	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock Outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
AbA:									
Adams	A								
		Jan-Dec	---	---	---	---	None	---	None
AbB:									
Adams	A								
		Jan-Dec	---	---	---	---	None	---	None
AbC:									
Adams	A								
		Jan-Dec	---	---	---	---	None	---	None
AbD:									
Adams	A								
		Jan-Dec	---	---	---	---	None	---	None
AgB:									
Adirondack	D								
		January	1.0-1.5	1.2-2.5	---	---	None	---	None
		February	1.0-1.5	1.2-2.5	---	---	None	---	None
		March	1.0-1.5	1.2-2.5	---	---	None	---	None
		April	1.0-1.5	1.2-2.5	---	---	None	---	None
		May	1.0-1.5	1.2-2.5	---	---	None	---	None
		November	1.0-1.5	1.2-2.5	---	---	None	---	None
		December	1.0-1.5	1.2-2.5	---	---	None	---	None
AhB:									
Adirondack, very bouldery	D								
		January	1.0-1.5	1.2-2.5	---	---	None	---	None
		February	1.0-1.5	1.2-2.5	---	---	None	---	None
		March	1.0-1.5	1.2-2.5	---	---	None	---	None
		April	1.0-1.5	1.2-2.5	---	---	None	---	None
		May	1.0-1.5	1.2-2.5	---	---	None	---	None
		November	1.0-1.5	1.2-2.5	---	---	None	---	None
		December	1.0-1.5	1.2-2.5	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
Ak:									
Adjidaumo	D								
		January	0.0-0.5	>6.0	---	---	None	---	None
		February	0.0-0.5	>6.0	---	---	None	---	None
		March	0.0-0.5	>6.0	---	---	None	---	None
		April	0.0-0.5	>6.0	---	---	None	---	None
		May	0.0-0.5	>6.0	---	---	None	---	None
		June	0.0-0.5	>6.0	---	---	None	---	None
		November	0.0-0.5	>6.0	---	---	None	---	None
		December	0.0-0.5	>6.0	---	---	None	---	None
Am:									
Adjidaumo, mucky silty clay	D								
		January	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		February	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		March	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		April	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		May	0.0	>6.0	0.0-1.0	Brief	Occasional	---	None
		June	0.0	>6.0	0.0-1.0	Brief	Occasional	---	None
		November	0.0	>6.0	0.0-1.0	Brief	Occasional	---	None
		December	0.0	>6.0	0.0-1.0	Brief	Occasional	---	None
AtA:									
Amenia	B								
		January	1.5-3.0	1.5-3.3	---	---	None	---	None
		February	1.5-3.0	1.5-3.3	---	---	None	---	None
		March	1.5-3.0	1.5-3.3	---	---	None	---	None
		April	1.5-3.0	1.5-3.3	---	---	None	---	None
		May	1.5-3.0	1.5-3.3	---	---	None	---	None
		November	1.5-3.0	1.5-3.3	---	---	None	---	None
		December	1.5-3.0	1.5-3.3	---	---	None	---	None
AtB:									
Amenia	B								
		January	1.5-3.0	1.5-3.3	---	---	None	---	None
		February	1.5-3.0	1.5-3.3	---	---	None	---	None
		March	1.5-3.0	1.5-3.3	---	---	None	---	None
		April	1.5-3.0	1.5-3.3	---	---	None	---	None
		May	1.5-3.0	1.5-3.3	---	---	None	---	None
		November	1.5-3.0	1.5-3.3	---	---	None	---	None
		December	1.5-3.0	1.5-3.3	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
AwA:									
Appleton	C								
		January	1.0-1.5	1.5-3.0	---	---	None	---	None
		February	1.0-1.5	1.5-3.0	---	---	None	---	None
		March	1.0-1.5	1.5-3.0	---	---	None	---	None
		April	1.0-1.5	1.5-3.0	---	---	None	---	None
		May	1.0-1.5	1.5-3.0	---	---	None	---	None
		November	1.0-1.5	1.5-3.0	---	---	None	---	None
		December	1.0-1.5	1.5-3.0	---	---	None	---	None
AwB:									
Appleton	C								
		January	1.0-1.5	1.5-3.0	---	---	None	---	None
		February	1.0-1.5	1.5-3.0	---	---	None	---	None
		March	1.0-1.5	1.5-3.0	---	---	None	---	None
		April	1.0-1.5	1.5-3.0	---	---	None	---	None
		May	1.0-1.5	1.5-3.0	---	---	None	---	None
		November	1.0-1.5	1.5-3.0	---	---	None	---	None
		December	1.0-1.5	1.5-3.0	---	---	None	---	None
BcB:									
Becket	C								
		March	2.0-3.5	2.0-3.5	---	---	None	---	None
		April	2.0-3.5	2.0-3.5	---	---	None	---	None
BeC:									
Becket, very bouldery	C								
		March	2.0-3.5	2.0-3.5	---	---	None	---	None
		April	2.0-3.5	2.0-3.5	---	---	None	---	None
BeD:									
Becket, very bouldery	C								
		March	2.0-3.5	2.0-3.5	---	---	None	---	None
		April	2.0-3.5	2.0-3.5	---	---	None	---	None
BgC:									
Becket, very bouldery	C								
		March	2.0-3.5	2.0-3.5	---	---	None	---	None
		April	2.0-3.5	2.0-3.5	---	---	None	---	None
Tunbridge, very bouldery	C								
		Jan-Dec	---	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
BgE:									
Becket, very bouldery	C								
		March	2.0-3.5	2.0-3.5	---	---	None	---	None
		April	2.0-3.5	2.0-3.5	---	---	None	---	None
Tunbridge, very bouldery	C								
		Jan-Dec	---	---	---	---	None	---	None
BhC:									
Benson	D								
		Jan-Dec	---	---	---	---	None	---	None
BhE:									
Benson	D								
		Jan-Dec	---	---	---	---	None	---	None
Bo:									
Beseman	A/D								
		January	0.0	>6.0	0.0-2.0	Very long	Frequent	---	None
		February	0.0	>6.0	0.0-2.0	Very long	Frequent	---	None
		March	0.0	>6.0	0.0-2.0	Very long	Frequent	---	None
		April	0.0	>6.0	0.0-2.0	Very long	Frequent	---	None
		May	0.0	>6.0	0.0-2.0	Long	Frequent	---	None
		June	0.0-0.5	>6.0	---	---	None	---	None
		July	0.0-1.0	>6.0	---	---	None	---	None
		November	0.0-1.0	>6.0	---	---	None	---	None
		December	0.0-1.0	>6.0	---	---	None	---	None
BrB:									
Bice	B								
		Jan-Dec	---	---	---	---	None	---	None
BrC:									
Bice	B								
		Jan-Dec	---	---	---	---	None	---	None
BsC:									
Bice, very stony	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
BvB:									
Bombay	B								
		March	1.5-2.0	2.5-5.0	---	---	None	---	None
		April	1.5-2.0	2.5-5.0	---	---	None	---	None
		May	1.5-2.0	2.5-5.0	---	---	None	---	None
Bx:									
Bucksport	D								
		January	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		February	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		March	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		April	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		May	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	---	None
		June	0.0-1.0	>6.0	---	---	None	---	None
		July	0.0-1.0	>6.0	---	---	None	---	None
		September	0.0-1.0	>6.0	---	---	None	---	None
		October	0.0-1.0	>6.0	---	---	None	---	None
		November	0.0-1.0	>6.0	---	---	None	---	None
		December	0.0-1.0	>6.0	---	---	None	---	None
CgA:									
Champlain	A								
		Jan-Dec	---	---	---	---	None	---	None
CgB:									
Champlain	A								
		Jan-Dec	---	---	---	---	None	---	None
CgC:									
Champlain	A								
		Jan-Dec	---	---	---	---	None	---	None
ChF:									
Champlain	A								
		Jan-Dec	---	---	---	---	None	---	None
Adams	A								
		Jan-Dec	---	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
		Jan-Dec	---	---	---	---	None	---	None
Ck:									
Churubusco----------------	D								
		January	0.0	1.3-4.2	0.0-1.0	Long	Frequent	---	None
		February	0.0	1.3-4.2	0.0-1.0	Long	Frequent	---	None
		March	0.0	1.3-4.2	0.0-1.0	Long	Frequent	---	None
		April	0.0	1.3-4.2	0.0-1.0	Long	Frequent	---	None
		May	0.0	1.3-4.2	0.0-1.0	Brief	Frequent	---	None
		June	0.0-0.5	1.3-4.2	---	---	None	---	None
		September	0.0-1.0	1.3-4.2	---	---	None	---	None
		October	0.0-1.0	1.3-4.2	---	---	None	---	None
		November	0.0-1.0	1.3-4.2	---	---	None	---	None
		December	0.0-1.0	1.3-4.2	---	---	None	---	None
ClC:									
Colosse, very stony-------	A								
Hermon, very stony--------	A								
		Jan-Dec	---	---	---	---	None	---	None
CmB:									
Colosse-------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
Trout River---------------	A								
		Jan-Dec	---	---	---	---	None	---	None
CmC:									
Colosse-------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
Trout River---------------	A								
		Jan-Dec	---	---	---	---	None	---	None
CnC:									
Colosse, very stony-------	A								
		Jan-Dec	---	---	---	---	None	---	None
Trout River, very stony---	A								
		Jan-Dec	---	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
CnD:									
Colosse, very stony	A								
		Jan-Dec	---	---	---	---	None	---	None
Trout River, very stony	A								
		Jan-Dec	---	---	---	---	None	---	None
CoA:									
Colton	A								
		Jan-Dec	---	---	---	---	None	---	None
CoB:									
Colton	A								
		Jan-Dec	---	---	---	---	None	---	None
CoC:									
Colton	A								
		Jan-Dec	---	---	---	---	None	---	None
CpC:									
Colton, very stony	A								
CpE:									
Colton, very stony	A								
		Jan-Dec	---	---	---	---	None	---	None
Crk:									
Cook	D								
		January	0.0-0.5	>6.0	---	---	None	---	None
		February	0.0-0.5	>6.0	---	---	None	---	None
		March	0.0-0.5	>6.0	---	---	None	---	None
		April	0.0-0.5	>6.0	---	---	None	---	None
		May	0.0-0.5	>6.0	---	---	None	---	None
		June	0.0-0.5	>6.0	---	---	None	---	None
		November	0.0-0.5	>6.0	---	---	None	---	None
		December	0.0-0.5	>6.0	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table Upper limit	Water table Lower limit	Ponding Surface water depth	Ponding Duration	Ponding Frequency	Flooding Duration	Flooding Frequency
			Ft	Ft	Ft				
Crr:									
Cornish	C								
		January	1.0-2.0	>6.0	---	---	None	---	None
		February	1.0-2.0	>6.0	---	---	None	---	None
		March	1.0-2.0	>6.0	---	---	None	Brief	Occasional
		April	1.0-2.0	>6.0	---	---	None	Brief	Occasional
		May	1.0-2.0	>6.0	---	---	None	Brief	Occasional
		June	---	---	---	---	None	Brief	Occasional
		July	---	---	---	---	None	Brief	Occasional
		August	---	---	---	---	None	Brief	Occasional
		September	---	---	---	---	None	Brief	Occasional
		October	---	---	---	---	None	Brief	Occasional
		November	1.0-2.0	>6.0	---	---	None	---	None
		December	1.0-2.0	>6.0	---	---	None	---	None
Cs:									
Covert	A								
		January	2.0-3.5	>6.0	---	---	None	---	None
		February	2.0-3.5	>6.0	---	---	None	---	None
		March	2.0-3.5	>6.0	---	---	None	---	None
		April	2.0-3.5	>6.0	---	---	None	---	None
		November	2.0-3.5	>6.0	---	---	None	---	None
		December	2.0-3.5	>6.0	---	---	None	---	None
CtsA:									
Covertfalls	C								
		January	1.5-2.5	1.5-3.3	---	---	None	---	None
		February	1.5-2.5	1.5-3.3	---	---	None	---	None
		March	1.5-2.5	1.5-3.3	---	---	None	---	None
		April	1.5-2.5	1.5-3.3	---	---	None	---	None
		May	1.5-2.5	1.5-3.3	---	---	None	---	None
		November	1.5-2.5	1.5-3.3	---	---	None	---	None
		December	1.5-2.5	1.5-3.3	---	---	None	---	None
CtsB:									
Covertfalls	C								
		January	1.5-2.5	1.5-3.3	---	---	None	---	None
		February	1.5-2.5	1.5-3.3	---	---	None	---	None
		March	1.5-2.5	1.5-3.3	---	---	None	---	None
		April	1.5-2.5	1.5-3.3	---	---	None	---	None
		May	1.5-2.5	1.5-3.3	---	---	None	---	None
		November	1.5-2.5	1.5-3.3	---	---	None	---	None
		December	1.5-2.5	1.5-3.3	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
CttB:									
Covertfalls, gravelly-----	C								
		January	1.5-2.5	1.5-3.3	---	---	None	---	None
		February	1.5-2.5	1.5-3.3	---	---	None	---	None
		March	1.5-2.5	1.5-3.3	---	---	None	---	None
		April	1.5-2.5	1.5-3.3	---	---	None	---	None
		May	1.5-2.5	1.5-3.3	---	---	None	---	None
		November	1.5-2.5	1.5-3.3	---	---	None	---	None
		December	1.5-2.5	1.5-3.3	---	---	None	---	None
CvA:									
Coveytown-----------------	C								
		January	1.0-1.5	>6.0	---	---	None	---	None
		February	1.0-1.5	>6.0	---	---	None	---	None
		March	1.0-1.5	>6.0	---	---	None	---	None
		April	1.0-1.5	>6.0	---	---	None	---	None
		May	1.0-1.5	>6.0	---	---	None	---	None
		November	1.0-1.5	>6.0	---	---	None	---	None
		December	1.0-1.5	>6.0	---	---	None	---	None
CvB:									
Coveytown-----------------	C								
		January	1.0-1.5	>6.0	---	---	None	---	None
		February	1.0-1.5	>6.0	---	---	None	---	None
		March	1.0-1.5	>6.0	---	---	None	---	None
		April	1.0-1.5	>6.0	---	---	None	---	None
		May	1.0-1.5	>6.0	---	---	None	---	None
		November	1.0-1.5	>6.0	---	---	None	---	None
		December	1.0-1.5	>6.0	---	---	None	---	None
CwB:									
Coveytown, very stony-----	C								
		January	1.0-1.5	>6.0	---	---	None	---	None
		February	1.0-1.5	>6.0	---	---	None	---	None
		March	1.0-1.5	>6.0	---	---	None	---	None
		April	1.0-1.5	>6.0	---	---	None	---	None
		May	1.0-1.5	>6.0	---	---	None	---	None
		November	1.0-1.5	>6.0	---	---	None	---	None
		December	1.0-1.5	>6.0	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
CxA:									
Croghan-------------------	B								
		January	1.5-2.0	>6.0	---	---	None	---	None
		February	1.5-2.0	>6.0	---	---	None	---	None
		March	1.5-2.0	>6.0	---	---	None	---	None
		April	1.5-2.0	>6.0	---	---	None	---	None
		May	1.5-2.0	>6.0	---	---	None	---	None
		November	1.5-2.0	>6.0	---	---	None	---	None
		December	1.5-2.0	>6.0	---	---	None	---	None
CxB:									
Croghan-------------------	B								
		January	1.5-2.0	>6.0	---	---	None	---	None
		February	1.5-2.0	>6.0	---	---	None	---	None
		March	1.5-2.0	>6.0	---	---	None	---	None
		April	1.5-2.0	>6.0	---	---	None	---	None
		May	1.5-2.0	>6.0	---	---	None	---	None
		November	1.5-2.0	>6.0	---	---	None	---	None
		December	1.5-2.0	>6.0	---	---	None	---	None
DeA:									
Deerfield-----------------	B								
		January	1.5-3.0	>6.0	---	---	None	---	None
		February	1.5-3.0	>6.0	---	---	None	---	None
		March	1.5-3.0	>6.0	---	---	None	---	None
		April	1.5-3.0	>6.0	---	---	None	---	None
		December	1.5-3.0	>6.0	---	---	None	---	None
DeB:									
Deerfield-----------------	B								
		January	1.5-3.0	>6.0	---	---	None	---	None
		February	1.5-3.0	>6.0	---	---	None	---	None
		March	1.5-3.0	>6.0	---	---	None	---	None
		April	1.5-3.0	>6.0	---	---	None	---	None
		December	1.5-3.0	>6.0	---	---	None	---	None
Df:									
Deinache------------------	A/D								
		January	0.0-1.0	>6.0	---	---	None	---	None
		February	0.0-1.0	>6.0	---	---	None	---	None
		March	0.0-1.0	>6.0	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
		April	0.0-1.0	>6.0	---	---	None	---	None
		May	0.0-1.0	>6.0	---	---	None	---	None
		November	0.0-1.0	>6.0	---	---	None	---	None
		December	0.0-1.0	>6.0	---	---	None	---	None
FeB:									
Fahey, loamy substratum---	B								
		March	1.5-2.0	>6.0	---	---	None	---	None
		April	1.5-2.0	>6.0	---	---	None	---	None
		May	1.5-2.0	>6.0	---	---	None	---	None
FhB:									
Fahey, very stony---------	B								
		March	1.5-2.0	>6.0	---	---	None	---	None
		April	1.5-2.0	>6.0	---	---	None	---	None
		May	1.5-2.0	>6.0	---	---	None	---	None
FkB:									
Fernlake------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
FlB:									
Fernlake, very bouldery---	A								
		Jan-Dec	---	---	---	---	None	---	None
FlC:									
Fernlake, very bouldery---	A								
		Jan-Dec	---	---	---	---	None	---	None
FlD:									
Fernlake, very bouldery---	A								
		Jan-Dec	---	---	---	---	None	---	None
FlF:									
Fernlake, very bouldery---	A								
		Jan-Dec	---	---	---	---	None	---	None
FmB:									
Flackville----------------	C								
		January	1.5-2.0	1.7-3.3	---	---	None	---	None
		February	1.5-2.0	1.7-3.3	---	---	None	---	None
		March	1.5-2.0	1.7-3.3	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
FmB:									
Flackville----------------	C								
		April	1.5-2.0	1.7-3.3	---	---	None	---	None
		May	1.5-2.0	1.7-3.3	---	---	None	---	None
		November	1.5-2.0	1.7-3.3	---	---	None	---	None
		December	1.5-2.0	1.7-3.3	---	---	None	---	None
Fn:									
Fluvaquents, frequently flooded------------------	---								
		January	0.0	>6.0	0.0-0.5	Brief	Occasional	Long	Frequent
		February	0.0	>6.0	0.0-0.5	Brief	Occasional	Long	Frequent
		March	0.0	>6.0	0.0-0.5	Brief	Occasional	Long	Frequent
		April	0.0	>6.0	0.0-0.5	Brief	Occasional	Long	Frequent
		May	0.0-1.5	>6.0	0.0-0.5	Brief	Occasional	Long	Frequent
		June	0.5-1.5	>6.0	0.0-0.5	Brief	Occasional	Long	Frequent
		July	---	---	---	---	None	Brief	Frequent
		September	---	---	---	---	None	Brief	Frequent
		October	0.5-1.5	>6.0	0.0-0.5	Brief	Occasional	Brief	Frequent
		November	0.5-1.5	>6.0	0.0-0.5	Brief	Occasional	Brief	Frequent
		December	0.0-1.0	>6.0	0.0-0.5	Brief	Occasional	Long	Frequent
Fluvaquents, frequently flooded------------------	D								
		January	0.5-1.5	>6.0	---	---	None	Long	Frequent
		February	0.5-1.5	>6.0	---	---	None	Long	Frequent
		March	0.5-1.5	>6.0	---	---	None	Long	Frequent
		April	0.5-1.5	>6.0	---	---	None	Long	Frequent
		May	0.5-1.5	>6.0	---	---	None	Long	Frequent
		June	0.5-1.5	>6.0	---	---	None	Brief	Frequent
		July	---	---	---	---	None	Brief	Frequent
		September	---	---	---	---	None	Brief	Frequent
		October	0.5-1.5	>6.0	---	---	None	Brief	Frequent
		November	0.5-1.5	>6.0	---	---	None	Brief	Frequent
		December	0.5-1.5	>6.0	---	---	None	Brief	Frequent
Udifluvents, frequently flooded------------------	B								
		January	2.0-6.0	>6.0	---	---	None	Brief	Frequent
		February	2.0-6.0	>6.0	---	---	None	Brief	Frequent
		March	2.0-6.0	>6.0	---	---	None	Brief	Frequent
		April	2.0-6.0	>6.0	---	---	None	Brief	Frequent
		May	2.0-6.0	>6.0	---	---	None	Brief	Frequent

Table 17.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
Udifluvents, frequently									
		June	---	---	---	---	None	Brief	Frequent
		October	---	---	---	---	None	Brief	Frequent
		November	2.0-6.0	>6.0	---	---	None	Brief	Frequent
		December	2.0-6.0	>6.0	---	---	None	Brief	Frequent
GfC:									
Gardenisle----------------	B								
		Jan-Dec	---	---	---	---	None	---	None
Benson--------------------	D								
		Jan-Dec	---	---	---	---	None	---	None
Gl:									
Gougeville, undrained-----	A/D								
		January	0.0-1.0	>6.0	---	---	None	---	None
		February	0.0-1.0	>6.0	---	---	None	---	None
		March	0.0-1.0	>6.0	---	---	None	---	None
		April	0.0-1.0	>6.0	---	---	None	---	None
		May	0.0-1.0	>6.0	---	---	None	---	None
		June	0.0-1.0	>6.0	---	---	None	---	None
		November	0.0-1.0	>6.0	---	---	None	---	None
		December	0.0-1.0	>6.0	---	---	None	---	None
GrA:									
Grattan-------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
GrB:									
Grattan-------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
GvB:									
Grenville-----------------	B								
		Jan-Dec	---	---	---	---	None	---	None
GwC:									
Grenville, very stony-----	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
Ha:									
Hailesboro----------------	C								
		January	1.0-1.5	>6.0	---	---	None	---	None
		February	1.0-1.5	>6.0	---	---	None	---	None
		March	1.0-1.5	>6.0	---	---	None	---	None
		April	1.0-1.5	>6.0	---	---	None	---	None
		May	1.0-1.5	>6.0	---	---	None	---	None
		June	1.0-1.5	>6.0	---	---	None	---	None
		October	1.0-1.5	>6.0	---	---	None	---	None
		November	1.0-1.5	>6.0	---	---	None	---	None
		December	1.0-1.5	>6.0	---	---	None	---	None
HeB:									
Hermon--------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
HeC:									
Hermon--------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
HfC:									
Hermon, very bouldery-----	A								
		Jan-Dec	---	---	---	---	None	---	None
HfD:									
Hermon, very bouldery-----	A								
		Jan-Dec	---	---	---	---	None	---	None
HgC:									
Hermon, very bouldery-----	A								
		Jan-Dec	---	---	---	---	None	---	None
Adirondack, very bouldery-	D								
		January	1.0-1.5	1.2-2.5	---	---	None	---	None
		February	1.0-1.5	1.2-2.5	---	---	None	---	None
		March	1.0-1.5	1.2-2.5	---	---	None	---	None
		April	1.0-1.5	1.2-2.5	---	---	None	---	None
		May	1.0-1.5	1.2-2.5	---	---	None	---	None
		November	1.0-1.5	1.2-2.5	---	---	None	---	None
		December	1.0-1.5	1.2-2.5	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
HlB:									
Heuvelton	C								
		January	1.5-2.0	1.6-3.3	---	---	None	---	None
		February	1.5-2.0	1.6-3.3	---	---	None	---	None
		March	1.5-2.0	1.6-3.3	---	---	None	---	None
		April	1.5-2.0	1.6-3.3	---	---	None	---	None
		November	1.5-2.0	1.6-3.3	---	---	None	---	None
		December	1.5-2.0	1.6-3.3	---	---	None	---	None
HlD:									
Heuvelton	C								
		January	1.5-2.0	1.6-3.3	---	---	None	---	None
		February	1.5-2.0	1.6-3.3	---	---	None	---	None
		March	1.5-2.0	1.6-3.3	---	---	None	---	None
		April	1.5-2.0	1.6-3.3	---	---	None	---	None
		November	1.5-2.0	1.6-3.3	---	---	None	---	None
		December	1.5-2.0	1.6-3.3	---	---	None	---	None
HoA:									
Hogansburg	B								
		March	1.5-2.0	1.5-2.8	---	---	None	---	None
		April	1.5-2.0	1.5-2.8	---	---	None	---	None
		May	1.5-2.0	1.5-2.8	---	---	None	---	None
HoB:									
Hogansburg	B								
		March	1.5-2.0	1.5-2.8	---	---	None	---	None
		April	1.5-2.0	1.5-2.8	---	---	None	---	None
		May	1.5-2.0	1.5-2.8	---	---	None	---	None
HrB:									
Hogansburg, very stony	B								
		March	1.5-2.0	1.5-2.8	---	---	None	---	None
		April	1.5-2.0	1.5-2.8	---	---	None	---	None
		May	1.5-2.0	1.5-2.8	---	---	None	---	None
InB:									
Irona	D								
		Jan-Dec	---	---	---	---	None	---	None
Conic	C								
		Jan-Dec	---	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
Jn:									
Junius--------------------	C								
		January	1.0-1.5	>6.0	---	---	None	---	None
		February	1.0-1.5	>6.0	---	---	None	---	None
		March	1.0-1.5	>6.0	---	---	None	---	None
		April	1.0-1.5	>6.0	---	---	None	---	None
		May	1.0-1.5	>6.0	---	---	None	---	None
		December	1.0-1.5	>6.0	---	---	None	---	None
KhB:									
Kalurah-------------------	B								
		January	1.5-2.0	2.5-4.2	---	---	None	---	None
		February	1.5-2.0	2.5-4.2	---	---	None	---	None
		March	1.5-2.0	2.5-4.2	---	---	None	---	None
		April	1.5-2.0	2.5-4.2	---	---	None	---	None
		May	1.5-2.0	2.5-4.2	---	---	None	---	None
		November	1.5-2.0	2.5-4.2	---	---	None	---	None
		December	1.5-2.0	2.5-4.2	---	---	None	---	None
KlB:									
Kalurah, very stony-------	B								
		January	1.5-2.0	2.5-4.2	---	---	None	---	None
		February	1.5-2.0	2.5-4.2	---	---	None	---	None
		March	1.5-2.0	2.5-4.2	---	---	None	---	None
		April	1.5-2.0	2.5-4.2	---	---	None	---	None
		May	1.5-2.0	2.5-4.2	---	---	None	---	None
		November	1.5-2.0	2.5-4.2	---	---	None	---	None
		December	1.5-2.0	2.5-4.2	---	---	None	---	None
Kr:									
Kingsbury-----------------	D								
		January	1.0-1.5	1.7-3.0	---	---	None	---	None
		February	1.0-1.5	1.7-3.0	---	---	None	---	None
		March	1.0-1.5	1.7-3.0	---	---	None	---	None
		April	1.0-1.5	1.7-3.0	---	---	None	---	None
		May	1.0-1.5	1.7-3.0	---	---	None	---	None
		December	1.0-1.5	1.7-3.0	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
Kr:									
Rhinebeck-----------------	D								
		January	1.0-1.5	1.7-3.3	---	---	None	---	None
		February	1.0-1.5	1.7-3.3	---	---	None	---	None
		March	1.0-1.5	1.7-3.3	---	---	None	---	None
		April	1.0-1.5	1.7-3.3	---	---	None	---	None
		May	1.0-1.5	1.7-3.3	---	---	None	---	None
Ld:									
Lovewell, stratified substratum---------------	B								
		January	1.5-3.0	>6.0	---	---	None	---	None
		February	1.5-3.0	>6.0	---	---	None	---	None
		March	1.5-3.0	>6.0	---	---	None	Brief	Occasional
		April	1.5-3.0	>6.0	---	---	None	Brief	Occasional
		May	1.5-3.0	>6.0	---	---	None	Brief	Occasional
		June	---	---	---	---	None	Brief	Occasional
		July	---	---	---	---	None	Brief	Occasional
		August	---	---	---	---	None	Brief	Occasional
		September	---	---	---	---	None	Brief	Occasional
		October	---	---	---	---	None	Brief	Occasional
		November	1.5-3.0	>6.0	---	---	None	---	None
		December	1.5-3.0	>6.0	---	---	None	---	None
Le:									
Loxley--------------------	A/D								
		January	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		February	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		March	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		April	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		May	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		June	0.0-1.0	>6.0	0.0-1.0	Long	Occasional	---	None
		July	0.0-1.0	>6.0	0.0-1.0	Brief	Occasional	---	None
		November	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		December	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
LtF:									
Lyman, very bouldery------	C/D								
		Jan-Dec	---	---	---	---	None	---	None
Tunbridge, very bouldery--	C								
		Jan-Dec	---	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
LtF:									
Rock Outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
Lv:									
Lyonmounten, undrained	D								
		January	0.0-0.5	>6.0	---	---	None	---	None
		February	0.0-0.5	>6.0	---	---	None	---	None
		March	0.0-0.5	>6.0	---	---	None	---	None
		April	0.0-0.5	>6.0	---	---	None	---	None
		May	0.0-0.5	>6.0	---	---	None	---	None
		November	0.0-0.5	>6.0	---	---	None	---	None
		December	0.0-0.5	>6.0	---	---	None	---	None
Ly:									
Lyonmounten, very stony	D								
		January	0.0-0.5	>6.0	---	---	None	---	None
		February	0.0-0.5	>6.0	---	---	None	---	None
		March	0.0-0.5	>6.0	---	---	None	---	None
		April	0.0-0.5	>6.0	---	---	None	---	None
		May	0.0-0.5	>6.0	---	---	None	---	None
		November	0.0-0.5	>6.0	---	---	None	---	None
		December	0.0-0.5	>6.0	---	---	None	---	None
MaB:									
Madrid	B								
		Jan-Dec	---	---	---	---	None	---	None
MaC:									
Madrid	B								
		Jan-Dec	---	---	---	---	None	---	None
MeA:									
Malone	C								
		January	1.0-1.5	1.5-3.0	---	---	None	---	None
		February	1.0-1.5	1.5-3.0	---	---	None	---	None
		March	1.0-1.5	1.5-3.0	---	---	None	---	None
		April	1.0-1.5	1.5-3.0	---	---	None	---	None
		May	1.0-1.5	1.5-3.0	---	---	None	---	None
		November	1.0-1.5	1.5-3.0	---	---	None	---	None
		December	1.0-1.5	1.5-3.0	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
MeB:									
Malone	C								
		January	1.0-1.5	1.5-3.0	---	---	None	---	None
		February	1.0-1.5	1.5-3.0	---	---	None	---	None
		March	1.0-1.5	1.5-3.0	---	---	None	---	None
		April	1.0-1.5	1.5-3.0	---	---	None	---	None
		May	1.0-1.5	1.5-3.0	---	---	None	---	None
		November	1.0-1.5	1.5-3.0	---	---	None	---	None
		December	1.0-1.5	1.5-3.0	---	---	None	---	None
MfB:									
Malone, very stony	C								
		January	1.0-1.5	1.5-3.0	---	---	None	---	None
		February	1.0-1.5	1.5-3.0	---	---	None	---	None
		March	1.0-1.5	1.5-3.0	---	---	None	---	None
		April	1.0-1.5	1.5-3.0	---	---	None	---	None
		May	1.0-1.5	1.5-3.0	---	---	None	---	None
		November	1.0-1.5	1.5-3.0	---	---	None	---	None
		December	1.0-1.5	1.5-3.0	---	---	None	---	None
Mk:									
Markey	A/D								
		January	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		February	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		March	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		April	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		May	0.0-1.0	>6.0	0.0-1.0	Very long	Occasional	---	None
		June	0.0-1.0	>6.0	---	---	None	---	None
		November	0.0-1.0	>6.0	---	---	None	---	None
		December	0.0-1.0	>6.0	---	---	None	---	None
Mn:									
Massena	C								
		January	1.0-1.5	>6.0	---	---	None	---	None
		February	1.0-1.5	>6.0	---	---	None	---	None
		March	1.0-1.5	>6.0	---	---	None	---	None
		April	1.0-1.5	>6.0	---	---	None	---	None
		May	1.0-1.5	>6.0	---	---	None	---	None
		November	1.0-1.5	>6.0	---	---	None	---	None
		December	1.0-1.5	>6.0	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
Mp:									
Medomak, stratified substratum	D								
		January	0.0	>6.0	0.0-1.0	Long	Occasional	---	None
		February	0.0	>6.0	0.0-1.0	Long	Occasional	---	None
		March	0.0	>6.0	0.0-1.0	Long	Frequent	Long	Frequent
		April	0.0	>6.0	0.0-1.0	Long	Frequent	Long	Frequent
		May	0.0-0.5	>6.0	0.0-1.0	Long	Frequent	Long	Frequent
		June	0.0-0.5	>6.0	---	---	None	Long	Occasional
		July	---	---	---	---	None	Long	Occasional
		August	---	---	---	---	None	Long	Occasional
		September	0.0-0.5	>6.0	---	---	None	Long	Frequent
		October	0.0-0.5	>6.0	---	---	None	Long	Frequent
		November	0.0-0.5	>6.0	---	---	None	---	None
		December	0.0-0.5	>6.0	---	---	None	---	None
Ms:									
Mino	C								
		January	1.0-1.5	>6.0	---	---	None	---	None
		February	1.0-1.5	>6.0	---	---	None	---	None
		March	1.0-1.5	>6.0	---	---	None	---	None
		April	1.0-1.5	>6.0	---	---	None	---	None
		May	1.0-1.5	>6.0	---	---	None	---	None
		November	1.0-1.5	>6.0	---	---	None	---	None
		December	1.0-1.5	>6.0	---	---	None	---	None
MtB:									
Monadnock	B								
		Jan-Dec	---	---	---	---	None	---	None
MtC:									
Monadnock	B								
		Jan-Dec	---	---	---	---	None	---	None
MuC:									
Monadnock, very bouldery	B								
		Jan-Dec	---	---	---	---	None	---	None
MuD:									
Monadnock, very bouldery	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
MuF:									
Monadnock, very bouldery--	B								
		Jan-Dec	---	---	---	---	None	---	None
MvA:									
Mooers--------------------	B								
		January	1.5-2.5	>6.0	---	---	None	---	None
		February	1.5-2.5	>6.0	---	---	None	---	None
		March	1.5-2.5	>6.0	---	---	None	---	None
		April	1.5-2.5	>6.0	---	---	None	---	None
		May	1.5-2.5	>6.0	---	---	None	---	None
		November	1.5-2.5	>6.0	---	---	None	---	None
		December	1.5-2.5	>6.0	---	---	None	---	None
MvB:									
Mooers--------------------	B								
		January	1.5-2.5	>6.0	---	---	None	---	None
		February	1.5-2.5	>6.0	---	---	None	---	None
		March	1.5-2.5	>6.0	---	---	None	---	None
		April	1.5-2.5	>6.0	---	---	None	---	None
		May	1.5-2.5	>6.0	---	---	None	---	None
		November	1.5-2.5	>6.0	---	---	None	---	None
		December	1.5-2.5	>6.0	---	---	None	---	None
MwA:									
Muskellunge---------------	D								
		January	1.0-1.5	1.7-3.3	---	---	None	---	None
		February	1.0-1.5	1.7-3.3	---	---	None	---	None
		March	1.0-1.5	1.7-3.3	---	---	None	---	None
		April	1.0-1.5	1.7-3.3	---	---	None	---	None
		May	1.0-1.5	1.7-3.3	---	---	None	---	None
		November	1.0-1.5	1.7-3.3	---	---	None	---	None
		December	1.0-1.5	1.7-3.3	---	---	None	---	None
MwB:									
Muskellunge---------------	D								
		January	1.0-1.5	1.7-3.3	---	---	None	---	None
		February	1.0-1.5	1.7-3.3	---	---	None	---	None
		March	1.0-1.5	1.7-3.3	---	---	None	---	None
		April	1.0-1.5	1.7-3.3	---	---	None	---	None
		May	1.0-1.5	1.7-3.3	---	---	None	---	None
		November	1.0-1.5	1.7-3.3	---	---	None	---	None
		December	1.0-1.5	1.7-3.3	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
NeC:									
Neckrock	B								
		Jan-Dec	---	---	---	---	None	---	None
Summerville	D								
		Jan-Dec	---	---	---	---	None	---	None
NoB:									
Nicholville	C								
		January	1.5-2.0	1.5-3.2	---	---	None	---	None
		February	1.5-2.0	1.5-3.2	---	---	None	---	None
		March	1.5-2.0	1.5-3.2	---	---	None	---	None
		April	1.5-2.0	1.5-3.2	---	---	None	---	None
		May	1.5-2.0	1.5-3.2	---	---	None	---	None
		November	1.5-2.0	1.5-3.2	---	---	None	---	None
		December	1.5-2.0	1.5-3.2	---	---	None	---	None
NrA:									
Northway	A/D								
		January	1.0-1.5	1.5-3.3	---	---	None	---	None
		February	1.0-1.5	1.5-3.3	---	---	None	---	None
		March	1.0-1.5	1.5-3.3	---	---	None	---	None
		April	1.0-1.5	1.5-3.3	---	---	None	---	None
		May	1.0-1.5	1.5-3.3	---	---	None	---	None
		November	1.0-1.5	1.5-3.3	---	---	None	---	None
		December	1.0-1.5	1.5-3.3	---	---	None	---	None
NrB:									
Northway	A/D								
		January	1.0-1.5	1.5-3.3	---	---	None	---	None
		February	1.0-1.5	1.5-3.3	---	---	None	---	None
		March	1.0-1.5	1.5-3.3	---	---	None	---	None
		April	1.0-1.5	1.5-3.3	---	---	None	---	None
		May	1.0-1.5	1.5-3.3	---	---	None	---	None
		November	1.0-1.5	1.5-3.3	---	---	None	---	None
		December	1.0-1.5	1.5-3.3	---	---	None	---	None
OcA:									
Occur	C								
		January	1.5-2.5	1.5-3.3	---	---	None	---	None
		February	1.5-2.5	1.5-3.3	---	---	None	---	None
		March	1.5-2.5	1.5-3.3	---	---	None	---	None
		April	1.5-2.5	1.5-3.3	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
		May	1.5-2.5	1.5-3.3	---	---	None	---	None
		November	1.5-2.5	1.5-3.3	---	---	None	---	None
		December	1.5-2.5	1.5-3.3	---	---	None	---	None
OcB:									
Occur	C								
		January	1.5-2.5	1.5-3.3	---	---	None	---	None
		February	1.5-2.5	1.5-3.3	---	---	None	---	None
		March	1.5-2.5	1.5-3.3	---	---	None	---	None
		April	1.5-2.5	1.5-3.3	---	---	None	---	None
		May	1.5-2.5	1.5-3.3	---	---	None	---	None
		November	1.5-2.5	1.5-3.3	---	---	None	---	None
		December	1.5-2.5	1.5-3.3	---	---	None	---	None
OgB:									
Ogdensburg	C								
		January	1.0-1.5	1.2-3.3	---	---	None	---	None
		February	1.0-1.5	1.2-3.3	---	---	None	---	None
		March	1.0-1.5	1.2-3.3	---	---	None	---	None
		April	1.0-1.5	1.2-3.3	---	---	None	---	None
		May	1.0-1.5	1.2-3.3	---	---	None	---	None
		November	1.0-1.5	1.2-3.3	---	---	None	---	None
		December	1.0-1.5	1.2-3.3	---	---	None	---	None
PeA:									
Peasleeville	C								
		January	1.0-1.5	>6.0	---	---	None	---	None
		February	1.0-1.5	>6.0	---	---	None	---	None
		March	1.0-1.5	>6.0	---	---	None	---	None
		April	1.0-1.5	>6.0	---	---	None	---	None
		May	1.0-1.5	>6.0	---	---	None	---	None
		November	1.0-1.5	>6.0	---	---	None	---	None
		December	1.0-1.5	>6.0	---	---	None	---	None
PeB:									
Peasleeville	C								
		January	1.0-1.5	>6.0	---	---	None	---	None
		February	1.0-1.5	>6.0	---	---	None	---	None
		March	1.0-1.5	>6.0	---	---	None	---	None
		April	1.0-1.5	>6.0	---	---	None	---	None
		May	1.0-1.5	>6.0	---	---	None	---	None
		November	1.0-1.5	>6.0	---	---	None	---	None
		December	1.0-1.5	>6.0	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
PfB:									
Peasleeville, very stony--	C								
		January	1.0-1.5	>6.0	---	---	None	---	None
		February	1.0-1.5	>6.0	---	---	None	---	None
		March	1.0-1.5	>6.0	---	---	None	---	None
		April	1.0-1.5	>6.0	---	---	None	---	None
		May	1.0-1.5	>6.0	---	---	None	---	None
		November	1.0-1.5	>6.0	---	---	None	---	None
		December	1.0-1.5	>6.0	---	---	None	---	None
Pg:									
Pinconning, undrained-----	B/D								
		January	0.0-1.0	1.7-3.3	0.0-1.0	Long	Frequent	---	None
		February	0.0-1.0	1.7-3.3	0.0-1.0	Long	Frequent	---	None
		March	0.0-1.0	1.7-3.3	0.0-1.0	Long	Frequent	---	None
		April	0.0-1.0	1.7-3.3	0.0-1.0	Long	Frequent	---	None
		May	0.0-1.0	1.7-3.3	---	---	None	---	None
		October	0.0-1.0	1.7-3.3	---	---	None	---	None
		November	0.0-1.0	1.7-3.3	---	---	None	---	None
		December	0.0-1.0	1.7-3.3	---	---	None	---	None
Ph:									
Pipestone----------------	B								
		January	1.0-1.5	>6.0	---	---	None	---	None
		February	1.0-1.5	>6.0	---	---	None	---	None
		March	1.0-1.5	>6.0	---	---	None	---	None
		April	1.0-1.5	>6.0	---	---	None	---	None
		May	1.0-1.5	>6.0	---	---	None	---	None
		June	1.0-1.5	>6.0	---	---	None	---	None
		October	1.0-1.5	>6.0	---	---	None	---	None
		November	1.0-1.5	>6.0	---	---	None	---	None
		December	1.0-1.5	>6.0	---	---	None	---	None
Pn:									
Pits, Gravel--------------	A								
		Jan-Dec	---	---	---	---	None	---	None
Po:									
Pits, Quarry--------------	---								
		Jan-Dec	---	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Pp:									
Pits, Sand	A								
		Jan-Dec	---	---	---	---	None	---	None
PtA:									
Plainfield	A								
		Jan-Dec	---	---	---	---	None	---	None
PtB:									
Plainfield	A								
		Jan-Dec	---	---	---	---	None	---	None
PtC:									
Plainfield	A								
		Jan-Dec	---	---	---	---	None	---	None
PvF:									
Plainfield	A								
		Jan-Dec	---	---	---	---	None	---	None
Grattan	A								
		Jan-Dec	---	---	---	---	None	---	None
RoB:									
Rock Outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
Ricker	A								
		Jan-Dec	---	---	---	---	None	---	None
Rr:									
Roundabout	C								
		January	1.0-1.5	>6.0	---	---	None	---	None
		February	1.0-1.5	>6.0	---	---	None	---	None
		March	1.0-1.5	>6.0	---	---	None	---	None
		April	1.0-1.5	>6.0	---	---	None	---	None
		May	1.0-1.5	>6.0	---	---	None	---	None
		November	1.0-1.5	>6.0	---	---	None	---	None
		December	1.0-1.5	>6.0	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
Ry:									
Runeberg------------------	C/D								
		January	0.0-1.0	1.8-3.0	---	---	None	---	None
		February	0.0-1.0	1.8-3.0	---	---	None	---	None
		March	0.0-1.0	1.8-3.0	---	---	None	---	None
		April	0.0-1.0	1.8-3.0	---	---	None	---	None
		May	0.0-1.0	1.8-3.0	---	---	None	---	None
		June	0.0-1.0	1.8-3.0	---	---	None	---	None
		July	0.0-1.0	1.8-3.0	---	---	None	---	None
		November	0.0-1.0	1.8-3.0	---	---	None	---	None
		December	0.0-1.0	1.8-3.0	---	---	None	---	None
Sb:									
Sabattis, undrained; very bouldery-----------------	D								
		January	0.0-1.0	>6.0	---	---	None	---	None
		February	0.0-1.0	>6.0	---	---	None	---	None
		March	0.0-1.0	>6.0	---	---	None	---	None
		April	0.0-1.0	>6.0	---	---	None	---	None
		May	0.0-1.0	>6.0	---	---	None	---	None
		November	0.0-1.0	>6.0	---	---	None	---	None
		December	0.0-1.0	>6.0	---	---	None	---	None
Se:									
Saprists, ponded----------	A/D								
		January	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		February	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		March	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		April	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		May	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		June	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		July	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		September	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		October	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		November	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		December	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
Aquents, ponded-----------	D								
		January	0.0	>6.0	0.0-2.0	Very long	Frequent	---	None
		February	0.0	>6.0	0.0-2.0	Very long	Frequent	---	None
		March	0.0	>6.0	0.0-2.0	Very long	Frequent	---	None
		April	0.0	>6.0	0.0-2.0	Very long	Frequent	---	None
		May	0.0-0.5	>6.0	0.0-2.0	Long	Frequent	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
Se:									
Aquents, ponded	D								
		June	0.0-0.5	>6.0	0.0-2.0	Long	Occasional	---	None
		July	0.0-0.5	>6.0	---	---	None	---	None
		September	0.0-0.5	>6.0	---	---	None	---	None
		October	0.0-0.5	>6.0	---	---	None	---	None
		November	0.0-0.5	>6.0	---	---	None	---	None
		December	0.0-0.5	>6.0	0.0-2.0	Long	Occasional	---	None
ShB:									
Schroon	B								
		January	1.5-2.0	>6.0	---	---	None	---	None
		February	1.5-2.0	>6.0	---	---	None	---	None
		March	1.5-2.0	>6.0	---	---	None	---	None
		April	1.5-2.0	>6.0	---	---	None	---	None
		November	1.5-2.0	>6.0	---	---	None	---	None
		December	1.5-2.0	>6.0	---	---	None	---	None
ShC:									
Schroon	B								
		January	1.5-2.0	>6.0	---	---	None	---	None
		February	1.5-2.0	>6.0	---	---	None	---	None
		March	1.5-2.0	>6.0	---	---	None	---	None
		April	1.5-2.0	>6.0	---	---	None	---	None
		November	1.5-2.0	>6.0	---	---	None	---	None
		December	1.5-2.0	>6.0	---	---	None	---	None
SkB:									
Schroon, very stony	B								
		January	1.5-2.0	>6.0	---	---	None	---	None
		February	1.5-2.0	>6.0	---	---	None	---	None
		March	1.5-2.0	>6.0	---	---	None	---	None
		April	1.5-2.0	>6.0	---	---	None	---	None
		November	1.5-2.0	>6.0	---	---	None	---	None
		December	1.5-2.0	>6.0	---	---	None	---	None
Sn:									
Sciota	C								
		January	1.0-1.5	>6.0	---	---	None	---	None
		February	1.0-1.5	>6.0	---	---	None	---	None
		March	1.0-1.5	>6.0	---	---	None	---	None
		April	1.0-1.5	>6.0	---	---	None	---	None
		May	1.0-1.5	>6.0	---	---	None	---	None
		November	1.0-1.5	>6.0	---	---	None	---	None
		December	1.0-1.5	>6.0	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
So:									
Shaker--------------------	C								
		January	1.0-1.5	1.5-3.3	---	---	None	---	None
		February	1.0-1.5	1.5-3.3	---	---	None	---	None
		March	1.0-1.5	1.5-3.3	---	---	None	---	None
		April	1.0-1.5	1.5-3.3	---	---	None	---	None
		May	1.0-1.5	1.5-3.3	---	---	None	---	None
		November	1.0-1.5	1.5-3.3	---	---	None	---	None
		December	1.0-1.5	1.5-3.3	---	---	None	---	None
SpB:									
Sheddenbrook--------------	A								
		January	1.5-2.0	>6.0	---	---	None	---	None
		February	1.5-2.0	>6.0	---	---	None	---	None
		March	1.5-2.0	>6.0	---	---	None	---	None
		April	1.5-2.0	>6.0	---	---	None	---	None
		May	1.5-2.0	>6.0	---	---	None	---	None
		December	1.5-2.0	>6.0	---	---	None	---	None
SrB:									
Skerry--------------------	C								
		January	1.5-2.5	1.5-3.0	---	---	None	---	None
		February	1.5-2.5	1.5-3.0	---	---	None	---	None
		March	1.5-2.5	1.5-3.0	---	---	None	---	None
		April	1.5-2.5	1.5-3.0	---	---	None	---	None
		May	1.5-2.5	1.5-3.0	---	---	None	---	None
		November	1.5-2.5	1.5-3.0	---	---	None	---	None
		December	1.5-2.5	1.5-3.0	---	---	None	---	None
SsB:									
Skerry, very bouldery-----	C								
		January	1.5-2.5	1.5-3.0	---	---	None	---	None
		February	1.5-2.5	1.5-3.0	---	---	None	---	None
		March	1.5-2.5	1.5-3.0	---	---	None	---	None
		April	1.5-2.5	1.5-3.0	---	---	None	---	None
		May	1.5-2.5	1.5-3.0	---	---	None	---	None
		November	1.5-2.5	1.5-3.0	---	---	None	---	None
		December	1.5-2.5	1.5-3.0	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
SsC:									
Skerry, very bouldery	C								
		January	1.5-2.5	1.5-3.0	---	---	None	---	None
		February	1.5-2.5	1.5-3.0	---	---	None	---	None
		March	1.5-2.5	1.5-3.0	---	---	None	---	None
		April	1.5-2.5	1.5-3.0	---	---	None	---	None
		May	1.5-2.5	1.5-3.0	---	---	None	---	None
		November	1.5-2.5	1.5-3.0	---	---	None	---	None
		December	1.5-2.5	1.5-3.0	---	---	None	---	None
StD:									
Success, very bouldery	A								
		Jan-Dec	---	---	---	---	None	---	None
SwB:									
Sunapee	B								
		January	1.5-3.0	>6.0	---	---	None	---	None
		February	1.5-3.0	>6.0	---	---	None	---	None
		March	1.5-3.0	>6.0	---	---	None	---	None
		April	1.5-3.0	>6.0	---	---	None	---	None
		May	1.5-3.0	>6.0	---	---	None	---	None
		November	1.5-3.0	>6.0	---	---	None	---	None
		December	1.5-3.0	>6.0	---	---	None	---	None
SxB:									
Sunapee, very bouldery	B								
		January	1.5-3.0	>6.0	---	---	None	---	None
		February	1.5-3.0	>6.0	---	---	None	---	None
		March	1.5-3.0	>6.0	---	---	None	---	None
		April	1.5-3.0	>6.0	---	---	None	---	None
		May	1.5-3.0	>6.0	---	---	None	---	None
		November	1.5-3.0	>6.0	---	---	None	---	None
		December	1.5-3.0	>6.0	---	---	None	---	None
Sz:									
Swanton	C/D								
		January	1.0-1.5	1.5-3.3	---	---	None	---	None
		February	1.0-1.5	1.5-3.3	---	---	None	---	None
		March	1.0-1.5	1.5-3.3	---	---	None	---	None
		April	1.0-1.5	1.5-3.3	---	---	None	---	None
		May	1.0-1.5	1.5-3.3	---	---	None	---	None
		November	1.0-1.5	1.5-3.3	---	---	None	---	None
		December	1.0-1.5	1.5-3.3	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
TcB:									
Topknot	D								
		January	1.0-1.5	1.0-1.7	---	---	None	---	None
		February	1.0-1.5	1.0-1.7	---	---	None	---	None
		March	1.0-1.5	1.0-1.7	---	---	None	---	None
		April	1.0-1.5	1.0-1.7	---	---	None	---	None
		May	1.0-1.5	1.0-1.7	---	---	None	---	None
		November	1.0-1.5	1.0-1.7	---	---	None	---	None
		December	1.0-1.5	1.0-1.7	---	---	None	---	None
Chazy	C								
		January	1.0-1.5	1.7-3.3	---	---	None	---	None
		February	1.0-1.5	1.7-3.3	---	---	None	---	None
		March	1.0-1.5	1.7-3.3	---	---	None	---	None
		April	1.0-1.5	1.7-3.3	---	---	None	---	None
		May	1.0-1.5	1.7-3.3	---	---	None	---	None
		November	1.0-1.5	1.7-3.3	---	---	None	---	None
		December	1.0-1.5	1.7-3.3	---	---	None	---	None
TnC:									
Tunbridge, very bouldery	C								
		Jan-Dec	---	---	---	---	None	---	None
Lyman, very bouldery	C/D								
		Jan-Dec	---	---	---	---	None	---	None
TnE:									
Tunbridge, very bouldery	C								
		Jan-Dec	---	---	---	---	None	---	None
Lyman, very bouldery	C/D								
		Jan-Dec	---	---	---	---	None	---	None
Ud:									
Udipsamments, smoothed	A								
		Jan-Dec	---	---	---	---	None	---	None
Psammaquents, smoothed	B								
		January	1.0-1.5	>6.0	---	---	None	---	None
		February	1.0-1.5	>6.0	---	---	None	---	None
		March	1.0-1.5	>6.0	---	---	None	---	None
		April	1.0-1.5	>6.0	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Ud:									
Psammaquents, smoothed----	B								
		May	1.0-1.5	>6.0	---	---	None	---	None
		November	1.0-1.5	>6.0	---	---	None	---	None
		December	1.0-1.5	>6.0	---	---	None	---	None
Ue:									
Udipsamments, Mine Spoil, non-acid-----------------	A								
		Jan-Dec	---	---	---	---	None	---	None
Uf:									
Udorthents, Refuse Substratum---------------	A								
		Jan-Dec	---	---	---	---	None	---	None
Ug:									
Udorthents, smoothed------	A								
		January	3.0-6.0	>6.0	---	---	None	---	None
		February	3.0-6.0	>6.0	---	---	None	---	None
		March	3.0-6.0	>6.0	---	---	None	---	None
		April	3.0-6.0	>6.0	---	---	None	---	None
		May	3.0-6.0	>6.0	---	---	None	---	None
		June	3.0-6.0	>6.0	---	---	None	---	None
		November	3.0-6.0	>6.0	---	---	None	---	None
		December	3.0-6.0	>6.0	---	---	None	---	None
Uh:									
Udorthents, wet substratum	C								
		January	1.0-3.0	>6.0	---	---	None	---	None
		February	1.0-3.0	>6.0	---	---	None	---	None
		March	1.0-3.0	>6.0	---	---	None	---	None
		April	1.0-3.0	>6.0	---	---	None	---	None
		May	1.0-3.0	>6.0	---	---	None	---	None
		June	1.0-3.0	>6.0	---	---	None	---	None
		July	1.0-3.0	>6.0	---	---	None	---	None
		October	1.0-3.0	>6.0	---	---	None	---	None
		November	1.0-3.0	>6.0	---	---	None	---	None
		December	1.0-3.0	>6.0	---	---	None	---	None
Un:									
Urban Land----------------	---								
		Jan-Dec	---	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
UpA:									
Urban Land----------------	---								
		Jan-Dec	---	---	---	---	None	---	None
Plainfield----------------	A								
		Jan-Dec	---	---	---	---	None	---	None
UpB:									
Urban Land----------------	---								
		Jan-Dec	---	---	---	---	None	---	None
Plainfield----------------	A								
		Jan-Dec	---	---	---	---	None	---	None
W:									
Water, areas < 40 acres---	---								
		Jan-Dec	---	---	---	---	None	---	None
WdB:									
Waddington----------------	A								
		Jan-Dec	---	---	---	---	None	---	None
Wn:									
Wainola, high ppt.--------	B								
		January	1.0-1.5	>6.0	---	---	None	---	None
		February	1.0-1.5	>6.0	---	---	None	---	None
		March	1.0-1.5	>6.0	---	---	None	---	None
		April	1.0-1.5	>6.0	---	---	None	---	None
		May	1.0-1.5	>6.0	---	---	None	---	None
		November	1.0-1.5	>6.0	---	---	None	---	None
		December	1.0-1.5	>6.0	---	---	None	---	None
WsB:									
Wallace-------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
WsC:									
Wallace-------------------	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
WsE:									
Wallace	B								
		Jan-Dec	---	---	---	---	None	---	None
Wu:									
Wonsqueak	D								
		January	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		February	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		March	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		April	0.0	>6.0	0.0-1.0	Very long	Frequent	---	None
		May	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		June	0.0-0.5	>6.0	---	---	None	---	None
		July	0.0-0.5	>6.0	---	---	None	---	None
		September	0.0-0.5	>6.0	---	---	None	---	None
		October	0.0-0.5	>6.0	---	---	None	---	None
		November	0.0-0.5	>6.0	---	---	None	---	None
		December	0.0-0.5	>6.0	---	---	None	---	None

Table 18.—Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
15:							
Loxley, undrained, high ppt.------------------	---	---	6-18	50-55	High	High	High
Beseman, undrained-----	---	---	0	12-36	High	High	High
17:							
Beseman, undrained-----	---	---	0	12-36	High	High	High
Rumney-----------------	---	---	0	---	High	High	High
Loxley, undrained------	---	---	6-18	50-55	High	High	High
367:							
Searsport--------------	---	---	0	---	Moderate	High	High
Borosaprists-----------	---	---	2-4	25-40	High	Moderate	Moderate
Naumburg---------------	---	---	0	---	Moderate	High	High
375C:							
Colton-----------------	---	---	0	---	Low	Low	High
Adams------------------	---	---	0	---	Low	Low	High
375F:							
Colton-----------------	---	---	0	---	Low	Low	High
Adams------------------	---	---	0	---	Low	Low	High
651C:							
Monadnock, very bouldery--------------	---	---	0	---	Low	Low	High
Tunbridge, very bouldery--------------	Bedrock (lithic)	20-40	0	---	Moderate	High	High
Sabattis, undrained; very bouldery---------	---	---	0	---	High	High	High
651D:							
Monadnock, very bouldery--------------	---	---	0	---	Low	Low	High
Tunbridge, very bouldery--------------	Bedrock (lithic)	20-40	0	---	Moderate	High	High
653C:							
Monadnock, very bouldery--------------	---	---	0	---	Low	Low	High
654C:							
Monadnock, very bouldery--------------	---	---	0	---	Low	Low	High
Sabattis, very bouldery	---	---	0	---	High	High	High
655B:							
Sunapee, very bouldery-	---	---	0	---	Moderate	Low	High
Monadnock, very bouldery--------------	---	---	0	---	Low	Low	High

Table 18.—Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In	In			
661C:							
Hermon, very bouldery	---	---	0	---	Low	Low	High
661D:							
Hermon, very bouldery	---	---	0	---	Low	Low	High
708B:							
Adirondack, very bouldery	Dense material	15-38	0	---	High	High	High
Sabattis, undrained; very bouldery	---	---	0	---	High	High	High
Tughill, very bouldery	---	---	0	---	High	High	High
721C:							
Becket, very bouldery	Dense material	18-36	0	---	Moderate	Low	Moderate
Tunbridge, very bouldery	Bedrock (lithic)	20-40	0	---	Moderate	High	High
Skerry, very bouldery	---	---	0	---	High	Low	Moderate
721D:							
Becket, very bouldery	Dense material	18-36	0	---	Moderate	Low	Moderate
Tunbridge, very bouldery	Bedrock (lithic)	20-40	0	---	Moderate	High	High
723C:							
Becket, very bouldery	Dense material	18-36	0	---	Moderate	Low	Moderate
723D:							
Becket, very bouldery	Dense material	18-36	0	---	Moderate	Low	Moderate
725B:							
Skerry, very bouldery	Dense material	15-36	0	---	High	Low	Moderate
Becket, very bouldery	Dense material	18-36	0	---	Moderate	Low	Moderate
727B:							
Skerry, very bouldery	Dense material	15-36	0	---	High	Low	Moderate
Adirondack, very bouldery	Dense material	15-38	0	---	High	High	High
831C:							
Tunbridge, very bouldery	Bedrock (lithic)	20-40	0	---	Moderate	High	High
Lyman, very bouldery	Bedrock (lithic)	10-20	0	---	Moderate	Low	High
831D:							
Tunbridge, very bouldery	Bedrock (lithic)	20-40	0	---	Moderate	High	High
Lyman, very bouldery	Bedrock (lithic)	10-20	0	---	Moderate	Low	High
831F:							
Tunbridge, very bouldery	Bedrock (lithic)	20-40	0	---	Moderate	High	High
Lyman, very bouldery	Bedrock (lithic)	10-20	0	---	Moderate	Low	High

Table 18.—Soil Features—Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
861F:							
Lyman, very bouldery	Bedrock (lithic)	10-20	0	---	Moderate	Low	High
Ricker, very bouldery	Bedrock (lithic)	2-26	0	---	Low	High	High
931C:							
Mundalite, very bouldery	Dense material	25-40	---	---	Moderate	Low	High
Rawsonville, very bouldery	Bedrock (lithic)	20-40	0	---	Moderate	High	High
Worden, very bouldery	Dense material	18-30	0	---	High	High	High
931D:							
Mundalite, very bouldery	Dense material	25-40	---	---	Moderate	Low	High
Rawsonville, very bouldery	Bedrock (lithic)	20-40	0	---	Moderate	High	High
933C:							
Mundalite, very bouldery	Dense material	25-40	---	---	Moderate	Low	High
Worden, very bouldery	Dense material	18-30	0	---	High	High	High
941C:							
Rawsonville, very bouldery	Bedrock (lithic)	20-40	0	---	Moderate	High	High
Hogback, very bouldery	Bedrock (lithic)	10-20	0	---	Moderate	High	High
941D:							
Rawsonville, very bouldery	Bedrock (lithic)	20-40	0	---	Moderate	High	High
Hogback, very bouldery	Bedrock (lithic)	10-20	0	---	Moderate	High	High
941F:							
Rawsonville, very bouldery	Bedrock (lithic)	20-40	0	---	Moderate	High	High
Hogback, very bouldery	Bedrock (lithic)	10-20	0	---	Moderate	High	High
943C:							
Rawsonville, very bouldery	Bedrock (lithic)	20-40	0	---	Moderate	High	High
Borosaprists	---	---	2-4	25-40	High	Moderate	Moderate
Ricker, very bouldery	Bedrock (lithic)	2-26	0	---	Low	High	High
945F:							
Hogback, very bouldery	Bedrock (lithic)	10-20	0	---	Moderate	High	High
Ricker, very bouldery	Bedrock (lithic)	2-26	0	---	Low	High	High
949F:							
Rockoutcrop	Bedrock (lithic)	0-0	0	---	None	---	---
Ricker, very bouldery	Bedrock (lithic)	2-26	0	---	Low	High	High
Hogback, very bouldery	Bedrock (lithic)	10-20	0	---	Moderate	High	High

Table 18.—Soil Features—Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
991D:							
Glebe, very bouldery	Bedrock (lithic)	20-40	0	---	High	High	High
Skylight, very bouldery	Bedrock (lithic)	12-40	0	---	Moderate	High	High
997F:							
Ricker, very bouldery	Bedrock (lithic)	2-26	0	---	Low	High	High
Skylight, very bouldery	Bedrock (lithic)	12-40	0	---	Moderate	High	High
Rock Outcrop	Bedrock (lithic)	0-0	0	---	None	---	---
AbA:							
Adams	---	---	0	---	Low	Low	High
AbB:							
Adams	---	---	0	---	Low	Low	High
AbC:							
Adams	---	---	0	---	Low	Low	High
AbD:							
Adams	---	---	0	---	Low	Low	High
AgB:							
Adirondack	Dense material	15-38	0	---	High	High	High
AhB:							
Adirondack, very bouldery	Dense material	15-38	0	---	High	High	High
Ak:							
Adjidaumo	---	---	0	---	High	High	Low
Am:							
Adjidaumo, mucky silty clay	---	---	0	---	High	High	Low
AtA:							
Amenia	Dense material	20-80	0	---	Moderate	Moderate	Low
AtB:							
Amenia	Dense material	20-80	0	---	Moderate	Moderate	Low
AwA:							
Appleton	Dense material	20-36	0	---	High	High	Low
AwB:							
Appleton	Dense material	20-36	0	---	High	High	Low
BcB:							
Becket	Dense material	18-36	0	---	Moderate	Low	Moderate
BeC:							
Becket, very bouldery	Dense material	18-36	0	---	Moderate	Low	Moderate
BeD:							
Becket, very bouldery	Dense material	18-36	0	---	Moderate	Low	Moderate
BgC:							
Becket, very bouldery	Dense material	18-36	0	---	Moderate	Low	Moderate
Tunbridge, very bouldery	Bedrock (lithic)	20-40	0	---	Moderate	High	High

Table 18.—Soil Features—Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
BgE:							
Becket, very bouldery--	Dense material	18-36	0	---	Moderate	Low	Moderate
Tunbridge, very bouldery--------------	Bedrock (lithic)	20-40	0	---	Moderate	High	High
BhC:							
Benson-----------------	Bedrock (lithic)	10-20	0	---	Moderate	Low	Low
BhE:							
Benson-----------------	Bedrock (lithic)	10-20	0	---	Moderate	Low	Low
Bo:							
Beseman----------------	---	---	0	12-36	High	High	High
BrB:							
Bice-------------------	---	---	0	---	Low	Low	High
BrC:							
Bice-------------------	---	---	0	---	Low	Low	High
BsC:							
Bice, very stony-------	---	---	0	---	Low	Low	High
BvB:							
Bombay-----------------	---	---	0	---	Moderate	Moderate	Low
Bx:							
Bucksport--------------	---	---	0	---	High	Moderate	High
CgA:							
Champlain--------------	---	---	0	---	Low	Low	Moderate
CgB:							
Champlain--------------	---	---	0	---	Low	Low	Moderate
CgC:							
Champlain--------------	---	---	0	---	Low	Low	Moderate
ChF:							
Champlain--------------	---	---	0	---	Low	Low	Moderate
Adams------------------	---	---	0	---	Low	Low	High
Ck:							
Churubusco-------------	Bedrock (lithic)	16-50	6-18	12-32	High	High	High
ClC:							
Colosse, very stony----	---	---	0	---	Low	Low	High
Hermon, very stony-----	---	---	0	---	Low	Low	High
CmB:							
Colosse----------------	---	---	0	---	Low	Low	High
Trout River------------	---	---	0	---	Low	Low	High
CmC:							
Colosse----------------	---	---	0	---	Low	Low	High
Trout River------------	---	---	0	---	Low	Low	High
CnC:							
Colosse, very stony----	---	---	0	---	Low	Low	High
Trout River, very stony	---	---	0	---	Low	Low	High

Table 18.—Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In	In			
CnD:							
Colosse, very stony	---	---	0	---	Low	Low	High
Trout River, very stony	---	---	0	---	Low	Low	High
CoA:							
Colton	---	---	0	---	Low	Low	High
CoB:							
Colton	---	---	0	---	Low	Low	High
CoC:							
Colton	---	---	0	---	Low	Low	High
CpC:							
Colton, very stony	---	---	0	---	Low	Low	High
CpE:							
Colton, very stony	---	---	0	---	Low	Low	High
Crk:							
Cook	---	---	0	---	Moderate	High	Moderate
Crr:							
Cornish	---	---	0	---	High	High	Moderate
Cs:							
Covert	---	---	0	---	Low	Low	Moderate
CtsA:							
Covertfalls	Abrupt textural change	18-40	0	---	Moderate	Moderate	Low
CtsB:							
Covertfalls	Abrupt textural change	18-40	0	---	Moderate	Moderate	Low
CttB:							
Covertfalls, gravelly	Abrupt textural change	18-40	0	---	Moderate	Moderate	Low
CvA:							
Coveytown	---	---	0	---	Moderate	Moderate	Moderate
CvB:							
Coveytown	---	---	0	---	Moderate	Moderate	Moderate
CwB:							
Coveytown, very stony	---	---	0	---	Moderate	Moderate	Moderate
CxA:							
Croghan	---	---	0	---	Moderate	Low	High
CxB:							
Croghan	---	---	0	---	Moderate	Low	High
DeA:							
Deerfield	---	---	0	---	Moderate	Low	High
DeB:							
Deerfield	---	---	0	---	Moderate	Low	High

Table 18.—Soil Features—Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
Df:							
Deinache	---	---	0	---	Moderate	High	Low
FeB:							
Fahey, loamy substratum	---	---	0	---	Low	Low	High
FhB:							
Fahey, very stony	---	---	0	---	Low	Low	High
FkB:							
Fernlake	---	---	0	---	Low	Low	High
FlB:							
Fernlake, very bouldery	---	---	0	---	Low	Low	High
FlC:							
Fernlake, very bouldery	---	---	0	---	Low	Low	High
FlD:							
Fernlake, very bouldery	---	---	0	---	Low	Low	High
FlF:							
Fernlake, very bouldery	---	---	0	---	Low	Low	High
FmB:							
Flackville	Abrupt textural change	20-40	0	---	Moderate	Low	Moderate
Fn:							
Fluvaquents, frequently flooded	---	---	---	---	---	---	---
Fluvaquents, frequently flooded	---	---	0	---	High	High	High
Udifluvents, frequently flooded	---	---	0	---	Moderate	High	High
GfC:							
Gardenisle	Bedrock (lithic)	20-40	0	---	Moderate	Low	Low
	Bedrock (paralithic)	20-39					
Benson	Bedrock (lithic)	10-20	0	---	Moderate	Low	Low
Gl:							
Gougeville, undrained	---	---	0	---	Moderate	High	Moderate
GrA:							
Grattan	---	---	0	---	Low	Low	High
GrB:							
Grattan	---	---	0	---	Low	Low	High
GvB:							
Grenville	Dense material	17-40	0	---	Moderate	Low	Low
GwC:							
Grenville, very stony	Dense material	17-40	0	---	Moderate	Low	Low
Ha:							
Hailesboro	---	---	0	---	High	High	Low
HeB:							
Hermon	---	---	0	---	Low	Low	High

Table 18.—Soil Features—Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
HeC:							
Hermon	---	---	0	---	Low	Low	High
HfC:							
Hermon, very bouldery	---	---	0	---	Low	Low	High
HfD:							
Hermon, very bouldery	---	---	0	---	Low	Low	High
HgC:							
Hermon, very bouldery	---	---	0	---	Low	Low	High
Adirondack, very bouldery	Dense material	15-38	0	---	High	High	High
HlB:							
Heuvelton	---	---	0	---	High	High	Low
HlD:							
Heuvelton	---	---	0	---	High	High	Low
HoA:							
Hogansburg	Dense material	18-35	0	---	High	Moderate	Low
HoB:							
Hogansburg	Dense material	18-35	0	---	High	Moderate	Low
HrB:							
Hogansburg, very stony	Dense material	18-35	0	---	High	Moderate	Low
InB:							
Irona	Bedrock (lithic)	10-20	0	---	Moderate	Moderate	Moderate
Conic	Dense material	15-40	0	---	Moderate	Low	Moderate
	Bedrock (lithic)	20-40					
Jn:							
Junius	---	---	0	---	Moderate	High	Moderate
KhB:							
Kalurah	---	---	0	---	High	Moderate	Low
KlB:							
Kalurah, very stony	---	---	0	---	High	Moderate	Low
Kr:							
Kingsbury	---	---	0	---	High	High	Moderate
Rhinebeck	---	---	0	---	High	High	Low
Ld:							
Lovewell, stratified substratum	---	---	0	---	High	Moderate	Moderate
Le:							
Loxley	---	---	6-18	50-55	High	High	High
LtF:							
Lyman, very bouldery	Bedrock (lithic)	10-20	0	---	Moderate	Low	High
Tunbridge, very bouldery	Bedrock (lithic)	20-40	0	---	Moderate	High	High
Rock Outcrop	Bedrock (lithic)	0-0	0	---	None	---	---

Table 18.—Soil Features—Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
Lv:							
Lyonmounten, undrained-	---	---	0	---	High	High	Moderate
Ly:							
Lyonmounten, very stony	---	---	0	---	High	High	Moderate
MaB:							
Madrid-----------------	---	---	0	---	Moderate	Low	Moderate
MaC:							
Madrid-----------------	---	---	0	---	Moderate	Low	Moderate
MeA:							
Malone-----------------	Dense material	18-36	0	---	High	High	Moderate
MeB:							
Malone-----------------	Dense material	18-36	0	---	High	High	Moderate
MfB:							
Malone, very stony-----	Dense material	18-36	0	---	High	High	Moderate
Mk:							
Markey-----------------	---	---	6-18	29-33	High	High	Low
Mn:							
Massena----------------	---	---	0	---	High	Moderate	Moderate
Mp:							
Medomak, stratified substratum-----------	---	---	0	---	High	High	Moderate
Ms:							
Mino-------------------	---	---	0	---	High	Moderate	Moderate
MtB:							
Monadnock--------------	---	---	0	---	Low	Low	High
MtC:							
Monadnock--------------	---	---	0	---	Low	Low	High
MuC:							
Monadnock, very bouldery--------------	---	---	0	---	Low	Low	High
MuD:							
Monadnock, very bouldery--------------	---	---	0	---	Low	Low	High
MuF:							
Monadnock, very bouldery--------------	---	---	0	---	Low	Low	High
MvA:							
Mooers-----------------	---	---	0	---	Low	Low	Moderate
MvB:							
Mooers-----------------	---	---	0	---	Low	Low	Moderate
MwA:							
Muskellunge------------	---	---	0	---	High	High	Low
MwB:							
Muskellunge------------	---	---	0	---	High	High	Low

Table 18.—Soil Features—Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
NeC:							
Neckrock	Bedrock (lithic)	20-40	0	---	Moderate	Low	Low
Summerville	Bedrock (lithic)	10-20	0	---	Moderate	Low	Low
NoB:							
Nicholville	---	---	0	---	High	Low	Moderate
NrA:							
Northway	Abrupt textural change	18-40	0	---	Moderate	Moderate	Low
NrB:							
Northway	Abrupt textural change	18-40	0	---	Moderate	Moderate	Low
OcA:							
Occur	Abrupt textural change	18-40	0	---	Moderate	Moderate	Low
OcB:							
Occur	Abrupt textural change	18-40	0	---	Moderate	Moderate	Low
OgB:							
Ogdensburg	Bedrock (lithic)	20-40	0	---	High	High	Low
PeA:							
Peasleeville	---	---	0	---	High	Moderate	Moderate
PeB:							
Peasleeville	---	---	0	---	High	Moderate	Moderate
PfB:							
Peasleeville, very stony	---	---	---	---	High	Moderate	Moderate
Pg:							
Pinconning, undrained	Abrupt textural change	20-40	0	---	Moderate	High	Moderate
Ph:							
Pipestone	---	---	0	---	Moderate	Low	Moderate
Pn:							
Pits, Gravel	---	---	0	---	None	---	---
Po:							
Pits, Quarry	Bedrock (lithic)	0-0	0	---	None	---	---
Pp:							
Pits, Sand	---	---	0	---	None	---	---
PtA:							
Plainfield	---	---	0	---	Low	Low	High
PtB:							
Plainfield	---	---	0	---	Low	Low	High
PtC:							
Plainfield	---	---	0	---	Low	Low	High
PvF:							
Plainfield	---	---	0	---	Low	Low	High
Grattan	---	---	0	---	Low	Low	High

Table 18.—Soil Features—Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
RoB:							
Rock Outcrop	Bedrock (lithic)	0-0	0	---	None	---	---
Ricker	Bedrock (lithic)	2-26	0	---	Low	High	High
Rr:							
Roundabout	---	---	0	---	High	High	Moderate
Ry:							
Runeberg	---	---	0	---	High	High	Low
Sb:							
Sabattis, undrained; very bouldery	---	---	0	---	High	High	High
Se:							
Saprists, ponded	---	---	2-4	25-40	High	High	Low
Aquents, ponded	---	---	---	---	High	High	High
ShB:							
Schroon	---	---	0	---	High	Low	High
ShC:							
Schroon	---	---	0	---	High	Low	High
SkB:							
Schroon, very stony	---	---	0	---	High	Low	High
Sn:							
Sciota	---	---	0	---	Moderate	Low	Moderate
So:							
Shaker	Abrupt textural change	18-40	0	---	High	Moderate	Moderate
SpB:							
Sheddenbrook	Bedrock (lithic)	20-40	0	---	Low	Moderate	High
SrB:							
Skerry	Dense material	15-36	0	---	High	Low	Moderate
SsB:							
Skerry, very bouldery	Dense material	15-36	0	---	High	Low	Moderate
SsC:							
Skerry, very bouldery	Dense material	15-36	0	---	High	Low	Moderate
StD:							
Success, very bouldery	Ortstein	1-35	0	---	Low	Low	High
SwB:							
Sunapee	---	---	0	---	Moderate	Low	High
SxB:							
Sunapee, very bouldery	---	---	0	---	Moderate	Low	High
Sz:							
Swanton	Abrupt textural change	18-40	0	---	High	High	Moderate
TcB:							
Topknot	Bedrock (lithic)	10-20	0	---	High	Moderate	Moderate
Chazy	Bedrock (lithic)	20-40	0	---	High	Moderate	Moderate

Table 18.—Soil Features—Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
TnC:							
Tunbridge, very bouldery	Bedrock (lithic)	20-40	0	---	Moderate	High	High
Lyman, very bouldery	Bedrock (lithic)	10-20	0	---	Moderate	Low	High
TnE:							
Tunbridge, very bouldery	Bedrock (lithic)	20-40	0	---	Moderate	High	High
Lyman, very bouldery	Bedrock (lithic)	10-20	0	---	Moderate	Low	High
Ud:							
Udipsamments, smoothed	---	---	---	---	Low	Low	Moderate
Psammaquents, smoothed	---	---	---	---	Moderate	Low	Moderate
Ue:							
Udipsamments, Mine Spoil, non-acid	---	---	0	---	Low	Low	Moderate
Uf:							
Udorthents, Refuse Substratum	---	---	0	---	Moderate	Low	High
Ug:							
Udorthents, smoothed	---	---	---	---	Moderate	Low	Moderate
Uh:							
Udorthents, wet substratum	---	---	---	---	High	Moderate	Moderate
Un:							
Urban Land	---	---	0	---	---	---	---
UpA:							
Urban Land	---	---	0	---	---	---	---
Plainfield	---	---	0	---	Low	Low	High
UpB:							
Urban Land	---	---	0	---	---	---	---
Plainfield	---	---	0	---	Low	Low	High
W:							
Water, areas < 40 acres	---	---	---	---	---	---	---
WdB:							
Waddington	---	---	0	---	Moderate	Low	Low
Wn:							
Wainola, high ppt.	---	---	0	---	Moderate	Low	Moderate
WsB:							
Wallace	Ortstein	6-24	0	---	Low	Low	High
WsC:							
Wallace	Ortstein	6-24	0	---	Low	Low	High
WsE:							
Wallace	Ortstein	6-24	0	---	Low	Low	High
Wu:							
Wonsqueak	---	---	0	---	High	Moderate	Moderate

Table 19.—Engineering Index Test Data

(LL means liquid limit; PI, plasticity index; MD, maximum dry density; OM, optimum moisture; LS, lineal shrinkage; and dashes indicate that data were not available. These soils are the typical pedons for the series in Clinton County, New York.)

Soil name, report number, horizon, and depth in inches	Classification		Grain-size distribution: Percentage passing sieve--					Percentage smaller than--						LL	PI	Moisture density		LS
	AASHTO	Unified	>3 inches	2 inches	3/4 inch	3/8 inch	No. 4	No. 10	No. 40	No. 200	.02 mm	.005 mm	.002 mm			MD	OM	
			Pct												Pct	Lb/ cu ft	Pct	Pct
Adams loamy sand (S85NY19-21)																		
AP-----0 to 7	A-2-4 (0)	SM	---	---	98.1	95.3	91.0	85.4	66.2	19.3	6.0	2.6	1.1	---	NP	109.5	13.1	0
E------7 to 9	A-2-4 (0)	SW-SM	---	---	98.1	93.6	89.1	83.0	58.6	11.5	--	--	--	---	NP	114.3	14.0	0
Bhs----9 to 11	A-2-4 (0)	SM	---	---	99.7	98.3	94.7	91.1	77.9	12.7	--	--	--	---	NP	109.5	14.0	0
Bs----11 to 18	A-2-4 (0)	SM	---	---	99.7	98.3	94.3	91.1	77.9	12.7	--	--	--	---	NP	109.5	14.0	0
BC----18 to 27	A-2-4 (0)	SM	---	---	99.7	98.3	95.8	90.6	77.6	16.3	2.9	1.0	0.1	---	NP	112.9	10.5	0
C1----27 to 35	A-3 (0)	SP	---	---	100	99.5	98.0	95.1	76.7	4.5	--	--	--	---	NP	111.0	13.3	0
C2----35 to 72	A-3 (0)	SW-SM	---	---	98.3	94.2	88.3	81.1	60.4	4.8	--	--	--	---	NP	117.5	10.1	0
Bombay loam (S85NY19-11)																		
AP------0 to 9	A-4 (0)	ML	100	98.8	94.5	92.6	91.3	89.5	83.9	52.5	31.8	13.5	6.2	22.2	18.7	110.4	15.4	2
BE------9 to 16	A-4 (0)	ML	---	---	98.7	97.9	97.1	95.4	90.5	56.7	29.3	15.6	7.0	18.6	16.1	114.5	14.0	2
E/B----16 to 23	A-4 (0)	ML	---	---	99.1	98.2	97.1	95.2	88.6	54.2	28.9	13.7	6.4	14.5	13.4	121.2	10.7	1
B/E----23 to 26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Bt-----26 to 34	A-4 (0)	ML	---	---	98.9	96.0	93.9	90.7	82.0	52.1	26.8	15.6	11.1	18.3	14.5	120.6	12.0	4
BC-----34 to 56	A-4 (0)	SM	---	96.1	94.3	91.5	88.3	85.6	77.3	41.4	21.6	12.3	7.9	16.4	14.1	127.6	8.7	2
C------56 to 72	A-4 (0)	SM	---	98.3	93.2	89.8	86.3	83.0	73.7	43.3	19.2	8.6	4.1	14.4	12.9	129.4	8.7	1

Table 19.—Engineering Index Test Data—continued

Soil name, report number, horizon, and depth in inches	Classification		Grain-size distribution											LL	PI	Moisture density		LS
			Percentage passing sieve--					Percentage smaller than--										
	AASHTO	Unified	>3 inches	2 inches	3/4 inch	3/8 inch	No. 4	No. 10	No. 40	No. 200	.02 mm	.005 mm	.002 mm			MD	OM	
			Pct												Pct	Lb/ cu ft	Pct	Pct
Hogansburg loam (S85NY19-19)																		
AP-----0 to 10	A-4 (1)	ML	---	---	97.2	95.4	93.4	90.9	83.9	55.8	33.5	17.5	8.7	28.8	24.4	103.7	16.7	4
Bw----10 to 15	A-4 (0)	SM-SC	---	100	95.3	91.4	87.8	83.7	74.5	50.3	28.8	17.0	9.9	25.0	19.1	115.3	13.9	5
BC----15 to 19	A-4 (0)	SM	100	98.6	91.0	87.2	83.6	79.0	70.5	47.9	26.2	12.4	7.7	19.9	16.8	119.5	12.2	2
C-----19 to 35	A-4 (0)	SM	100	92.7	88.4	84.0	80.1	75.6	66.9	47.3	24.1	10.6	5.7	17.1	14.3	126.9	10.2	2
Cd----35 to 72	A-2-4 (0)	SM	100	93.0	86.9	80.7	75.7	69.4	58.5	35.4	15.3	5.6	3.3	---	NP	133.4	7.4	1
Schroon fine sandy loam																		
Ap------0 to 8	A-4 (0)	SM	100	97.4	93.7	88.8	83.9	79.7	71.4	47.2	21.7	7.3	3.8	---	NP	110.0	15.5	0
Bw1-----8 to 14	A-2-4 (0)	SM	---	100	98.2	96.2	94.3	91.5	81.7	35.3	15.4	5.2	2.7	---	NP	116.4	13.2	0
Bw2----14 to 23	A-2-4 (0)	SM	100	97.2	92.3	88.4	85.1	81.1	68.6	25.5	10.3	4.8	2.2	---	NP	125.2	8.5	0
C1-----23 to 44	A-2-4 (0)	SM	100	96.4	83.9	79.0	76.2	73.3	62.2	27.2	10.0	3.8	2.0	---	NP	127.0	9.0	0
C2-----44 to 60	A-2-4 (0)	SM	100	96.3	84.9	80.9	78.2	73.9	60.8	22.2	8.5	3.5	1.8	---	NP	125.7	8.9	0
C3-----60 to 72	A-2-4 (0)	SM	100	97.9	88.5	84.2	80.6	76.6	64.2	25.5	9.0	3.9	2.0	---	NP	126.2	8.0	0

Table 20.—Relationship between Soil Series, their Parent Material, Landscape Position, and Drainage

Nature of Parent Material	Excessively to well drained	Moderately well drained	Somewhat poorly drained	Poorly drained	Very poorly drained
	Soils from Glacial Till				
High lime coarse-loamy, very deep	Grenville	Hogansburg	Malone		Runeberg
High lime, mesic soil, coarse-loamy, very deep		Amenia	Massena		
Medium lime coarse-loamy, very deep		Kalurah			
Medium-high lime, mesic soil loamy, very deep	Madrid	Bombay	Appleton		
Moderately deep to limestone bedrock	Neckrock		Ogdensburg		
Moderately deep to limestone Bedrock, mesic soil	Gardenisle				
Shallow to limestone bedrock	Summerville				
Shallow to limestone bedrock Loamy-skeletal, mesic soil	Benson				
Medium lime coarse-loamy	Bice	Schroon	Peasleeville	Lyonmounten	Sabattis
Sandy, low lime, very deep	Fernlake				
Loamy-skeletal, low lime, very deep					Tughill
Sandy-skeletal low lime, very deep	Herman				
Sandy-skeletal, low lime, very deep, > 60 percent orstein	Success				
Moderately deep to sandstone bedrock, coarse-loamy	Conic		Chazy		
Shallow to sandstone bedrock, coarse-loamy	Irona		Topknot		
Moderately deep to crystalline bedrock, coarse-loamy, thin spodic	Tunbridge				

See footnotes at end of table.

Table 20.—Relationship between Soil Series, their Parent Material, Landscape Position, and Drainage—Continued

Nature of Parent Material	Excessively to well drained	Moderately well drained	Somewhat poorly drained	Poorly drained	Very poorly drained
	Soils from Glacial Till				
Moderately deep to crystalline bedrock, coarse-loamy, thick spodic	Rawsonville				
Moderately deep to crystalline Bedrock, coarse-loamy, cryic soil	Glebe				
Shallow to crystalline bedrock, coarse-loamy, thin spodic	Lyman				
Shallow to crystalline bedrock, coarse-loamy, thick spodic	Hogback				
Shallow to crystalline bedrock, sandy, cryic soil	Skylight				
Low lime, thin spodic coarse-loamy, very deep	Monadnock	Sunapee			
Low lime, thick spodic, very deep, coarse-loamy, dense substrata	Mundalite		Worden		
Low lime, thin spodic, very deep, coarse-loamy, dense substrata	Becket	Skerry	Adirondack		
	Water-Worked Till or Glacial Lake Beach Deposits				
Low-high lime, sandy over loamy		Occur	Coveytown		Cook
Medium lime, mesic soil sandy over loamy		Covertfalls	Northway		
Low lime, sandy-skeletal	Trout River	Fahey			
Low lime, loamy skeletal	Colosse				
High lime loamy-skeletal	Waddington				
	Soils from Outwash Deposits				
Low lime, spodic material, sandy-skeletal	Colton				
Low lime, spodic material, sands	Adams	Croghan	Wainola	Naumburg	Searsport
Low to medium lime, mesic sands, spodic material	Grattan	Covert	Pipestone		
Low lime sands, spodic > 60 percent orstein cementation	Wallace				
Medium to high lime sands	Champlain	Mooers	Sciota	Deinache	

See footnotes at end of table.

Table 20.—Relationship between Soil Series, their Parent Material, Landscape Position, and Drainage—Continued

Nature of Parent Material	Excessively to well drained	Moderately well drained	Somewhat poorly drained	Poorly drained	Very poorly drained
	Soils from Outwash Deposits				
Medium to high lime sands, mesic soil	Plainfield	Deerfield	Junius	Gougeville	
Medium to high lime sands, moderately deep over sandstone bedrock	Sheddenbrook				
	Lacustrine or Marine Deposits				
Medium to high lime; sandy over clayey		Flackville			Pinconning
Medium to high lime coarse-loamy over clayey			Swanton		
Medium to high lime, coarse-loamy over clayey, mesic soil			Shaker		
Medium to high lime, dominantly clay with some silt		Heuvelton	Muskellunge	Adjidaumo	Adjidaumo
Medium to high lime, dominantly clay with some silt, mesic soil			Rhinebeck		
Medium to high lime, dominantly clay, (very fine) mesic			Kingsbury		
Medium to high lime, fine-silty texture class			Hailesboro		
Medium to high lime, coarse-silty texture class		Nicholville	Roundabout		
Medium to high lime, coarse-loamy texture class			Mino		
	Soils on Flood Plains				
Coarse-silty		Lovewell	Cornish		Medomak
Coarse-loamy texture class				Rumney	
Frequently flooded very deep	Udifluvents		Fluvaquents	Fluvaquents	
	Organic Soils				
Shallow to moderately deep over bedrock (dysic)	Ricker				Churubusco

See footnotes at end of table.

Table 20.—Relationship between Soil Series, their Parent Material, Landscape Position, and Drainage—Continued

Nature of Parent Material	Excessively to well drained	Moderately well drained	Somewhat poorly drained	Poorly drained	Very poorly drained
	Organic Soils				
Very deep sapric (euic)					Bucksport
Very deep sapric (dysic)					Loxley
Sapric over loamy (euic)					Wonsqueak
Sapric over loamy (dysic)					Beseman
Sapric over sands (euic)					Markey
	Miscellaneous Soil Types				
	Udorthents			Udorthents	
	Udipsamments			Psammaquents	
	Urban land				
	Quarry				
	Gravel Pit				
	Sand Pit				Saprists & Aquents

* Most Clinton County soils are in the frigid soil temperature class, unless specified as mesic or cyric soil.

Table 21.—Classification of the Soils

Soil name	Family or higher taxonomic class
Adams	Sandy, mixed, frigid Typic Haplorthods
Adirondack	Coarse-loamy, mixed, frigid Typic Epiaquods
Adjidaumo	Fine, mixed, nonacid, frigid Mollic Endoaquepts
Amenia	Coarse-loamy, mixed, mesic Aquic Eutrochrepts
Appleton	Fine-loamy, mixed, mesic Aeric Epiaqualfs
Aquents	Aquents
Becket	Coarse-loamy, mixed, frigid Oxyaquic Haplorthods
Benson	Loamy-skeletal, mixed, mesic Lithic Eutrochrepts
Beseman	Loamy, mixed, dysic Terric Borosaprists
Bice	Coarse-loamy, mixed, frigid Typic Dystrochrepts
Bombay	Coarse-loamy, mixed, mesic Oxyaquic Glossudalfs
Borosaprists	Borosaprists
Bucksport	Euic Typic Borosaprists
Champlain	Mixed, frigid Typic Udipsamments
Chazy	Coarse-loamy, mixed, nonacid, frigid Aeric Endoaquepts
Churubusco	Dysic Lithic Borosaprists
Colosse	Loamy-skeletal, mixed, frigid Entic Haplorthods
Colton	Sandy-skeletal, mixed, frigid Typic Haplorthods
Conic	Coarse-loamy, mixed, frigid Typic Dystrochrepts
Cook	Sandy over loamy, mixed, nonacid, frigid Mollic Endoaquents
Cornish	Coarse-silty, mixed, frigid Fluvaquentic Dystrochrepts
Covert	Sandy, mixed, mesic Oxyaquic Haplorthods
Covertfalls	Sandy over loamy, mixed, mesic Aquentic Haplorthods
Coveytown	Sandy over loamy, mixed, nonacid, frigid Aeric Endoaquents
Croghan	Sandy, mixed, frigid Aquic Haplorthods
Deerfield	Mixed, mesic Aquic Udipsamments
Deinache	Mixed, frigid Mollic Psammaquents
Fahey	Sandy-skeletal, mixed, frigid Aquentic Haplorthods
Fernlake	Sandy, mixed, frigid Entic Haplorthods
Flackville	Sandy over clayey, mixed, frigid Aquic Haplorthods
Fluvaquents	Fluvaquents
Gardenisle	Fine-loamy, mixed, mesic Typic Eutrochrepts
Glebe	Coarse-loamy, mixed Typic Humicryods
Gougeville	Mixed, mesic Humaqueptic Psammaquents
Grattan	Sandy, mixed, mesic Entic Haplorthods
Grenville	Coarse-loamy, mixed, frigid Typic Eutrochrepts
Hailesboro	Fine-silty, mixed, frigid Aeric Endoaqualfs
Hermon	Sandy-skeletal, mixed, frigid Typic Haplorthods
Heuvelton	Fine, mixed, frigid Aquic Glossoboralfs
Hogansburg	Coarse-loamy, mixed, frigid Aquic Eutrochrepts
Hogback	Loamy, mixed, frigid Lithic Haplorthods
Irona	Loamy, mixed, frigid Lithic Dystrochrepts
Junius	Mixed, mesic Typic Psammaquents
Kalurah	Coarse-loamy, mixed, frigid Aquic Dystric Eutrochrepts
Kingsbury	Very-fine, illitic, mesic Aeric Epiaqualfs
Lovewell	Coarse-silty, mixed, frigid Fluvaquentic Dystrochrepts
Loxley	Dysic Typic Borosaprists
Lyman	Loamy, mixed, frigid Lithic Haplorthods
Lyonmounten	Coarse-loamy, mixed, nonacid, frigid Typic Humaquepts
Madrid	Coarse-loamy, mixed, mesic Haplic Glossudalfs
Malone	Coarse-loamy, mixed, nonacid, frigid Aeric Epiaquepts
Markey	Sandy or sandy-skeletal, mixed, euic Terric Borosaprists
Massena	Coarse-loamy, mixed, nonacid, mesic Aeric Endoaquepts
Medomak	Coarse-silty, mixed, nonacid, frigid Fluvaquentic Humaquepts
Mino	Coarse-loamy, mixed, nonacid, frigid Aeric Endoaquepts
Monadnock	Coarse-loamy over sandy or sandy-skeletal, mixed, frigid Typic Haplorthods
Mooers	Mixed, frigid Oxyaquic Udipsamments
Mundalite	Coarse-loamy, mixed, frigid Oxyaquic Haplorthods
Muskellunge	Fine, mixed, frigid Aeric Epiaqualfs
Naumburg	Sandy, mixed, frigid Typic Endoaquods
Neckrock	Fine-loamy, mixed Eutric Glossoboralfs
Nicholville	Coarse-silty, mixed, frigid Aquic Haplorthods
Northway	Sandy over loamy, mixed, mesic Typic Epiaquods
Occur	Sandy over loamy, mixed, frigid Aquentic Haplorthods

Table 21.—Classification of the Soils—Continued

Soil name	Family or higher taxonomic class
Ogdensburg	Coarse-loamy, mixed Aquic Haploborolls
Peasleeville	Coarse-loamy, mixed, nonacid, frigid Aeric Endoaquepts
Pinconning	Sandy over clayey, mixed, nonacid, frigid Mollic Epiaquents
Pipestone	Sandy, mixed, mesic Typic Endoaquods
Plainfield	Mixed, mesic Typic Udipsamments
Psammaquents	Psammaquents
Rawsonville	Coarse-loamy, mixed, frigid Typic Haplorthods
Rhinebeck	Fine, illitic, mesic Aeric Epiaqualfs
Ricker	Dysic Lithic Borofolists
Roundabout	Coarse-silty, mixed, nonacid, frigid Aeric Epiaquepts
Rumney	Coarse-loamy, mixed, nonacid, frigid Aeric Fluvaquents
Runeberg	Coarse-loamy, mixed, frigid Typic Endoaquolls
Sabattis	Coarse-loamy, mixed, nonacid, frigid Histic Humaquepts
Saprists	Saprists
Schroon	Coarse-loamy, mixed, frigid Aquic Dystrochrepts
Sciota	Mixed, frigid Aquic Udipsamments
Searsport	Sandy, mixed, frigid Histic Humaquepts
Shaker	Coarse-loamy over clayey, mixed, nonacid, mesic Aeric Epiaquepts
Sheddenbrook	Sandy, mixed, frigid Aquentic Haplorthods
Skerry	Coarse-loamy, mixed, frigid Aquic Haplorthods
Skylight	Sandy, mixed Lithic Humicryods
Success	Sandy-skeletal, mixed, frigid, ortstein Typic Haplorthods
Summerville	Loamy, mixed, frigid Lithic Eutrochrepts
Sunapee	Coarse-loamy, mixed, frigid Aquic Haplorthods
Swanton	Coarse-loamy over clayey, mixed, nonacid, frigid Aeric Epiaquepts
Topknot	Loamy, mixed, nonacid, frigid Lithic Endoaquepts
Trout River	Sandy-skeletal, mixed, frigid Entic Haplorthods
Tughill	Loamy-skeletal, mixed, nonacid, frigid Typic Endoaquepts
Tunbridge	Coarse-loamy, mixed, frigid Typic Haplorthods
Udifluvents	Udifluvents
Udipsamments	Udipsamments
Udipsamments, Mine Spoil	Udipsamments
Udorthents	Udorthents
Udorthents, Refuse Substratum	Udorthents
Waddington	Loamy-skeletal, mixed, frigid Typic Eutrochrepts
Wainola	Sandy, mixed, frigid Typic Endoaquods
Wallace	Sandy, mixed, frigid, ortstein Typic Haplorthods
Wonsqueak	Loamy, mixed, euic Terric Borosaprists
Worden	Coarse-loamy, mixed, frigid Aquic Haplorthods

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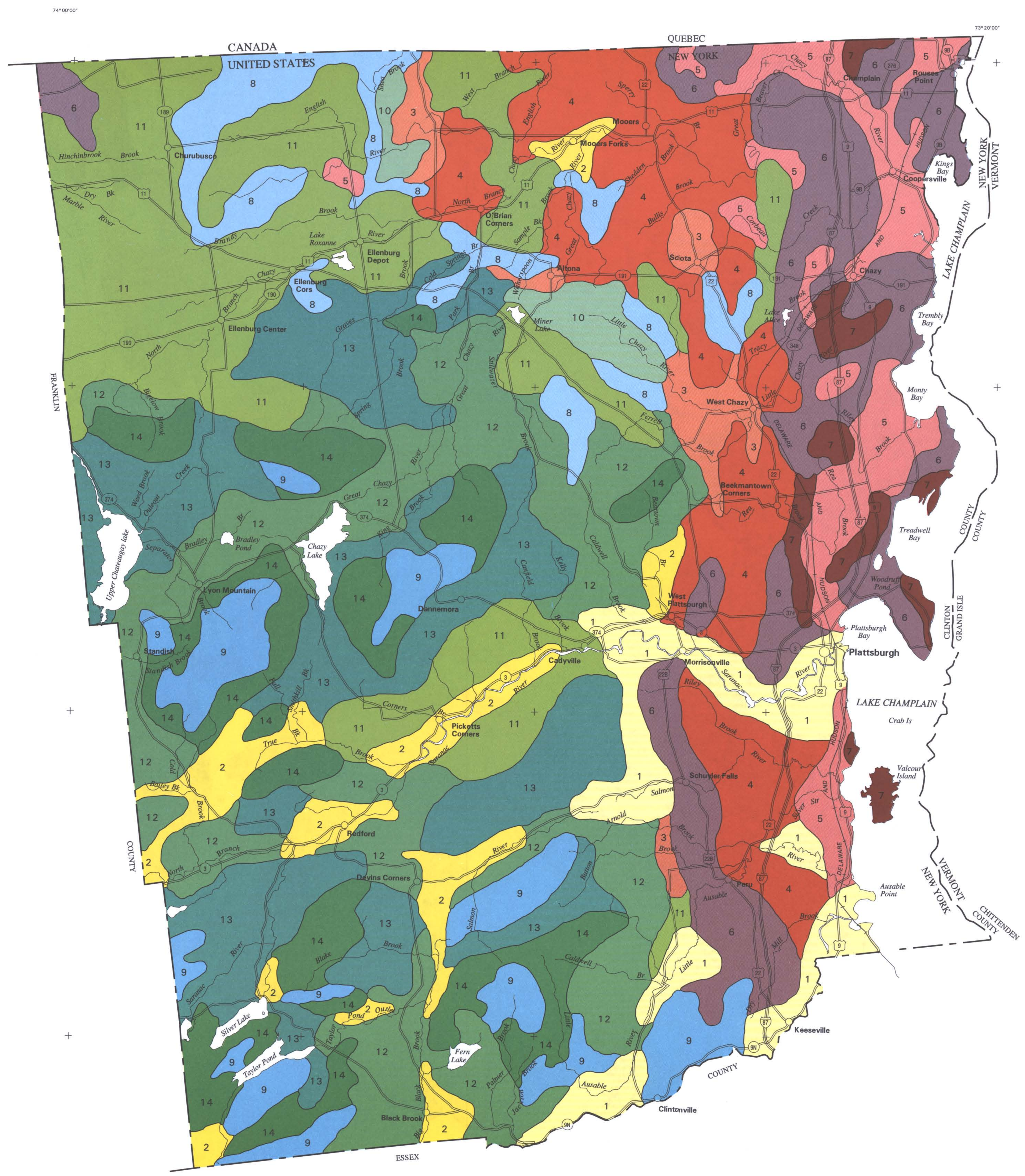


LEGEND

Areas Dominated by Soils Formed in Glacial Outwash and Glacial Lake Beach Ridges

- 1 Champlain-Adams-Croghan
- 2 Colton-Adams
- 3 Colosse-Trout River
- 4 Coveytown-Fahey-Malone

Areas Dominated by Soils Formed in Lacustrine and Marine Sediments

- 5 Muskellunge-Adjidaumo-Swanton

Areas Dominated by Soils Formed in Non-Acid Glacial Till Deposits

- 6 Malone-Hogansburg-Runeberg
- 7 Neckrock-Summerville

Areas Dominated by Soils Formed in Moderately Acid and Strongly Acid Glacial Till Deposits

- 8 Irona-Conic-Topknot
- 9 Lyman-Tunbridge-Ricker
- 10 Rockoutcrop-Ricker
- 11 Schroon-Peasleeville
- 12 Monadnock-Sunapee
- 13 Skerry-Becket-Adirondack
- 14 Becket-Tunbridge

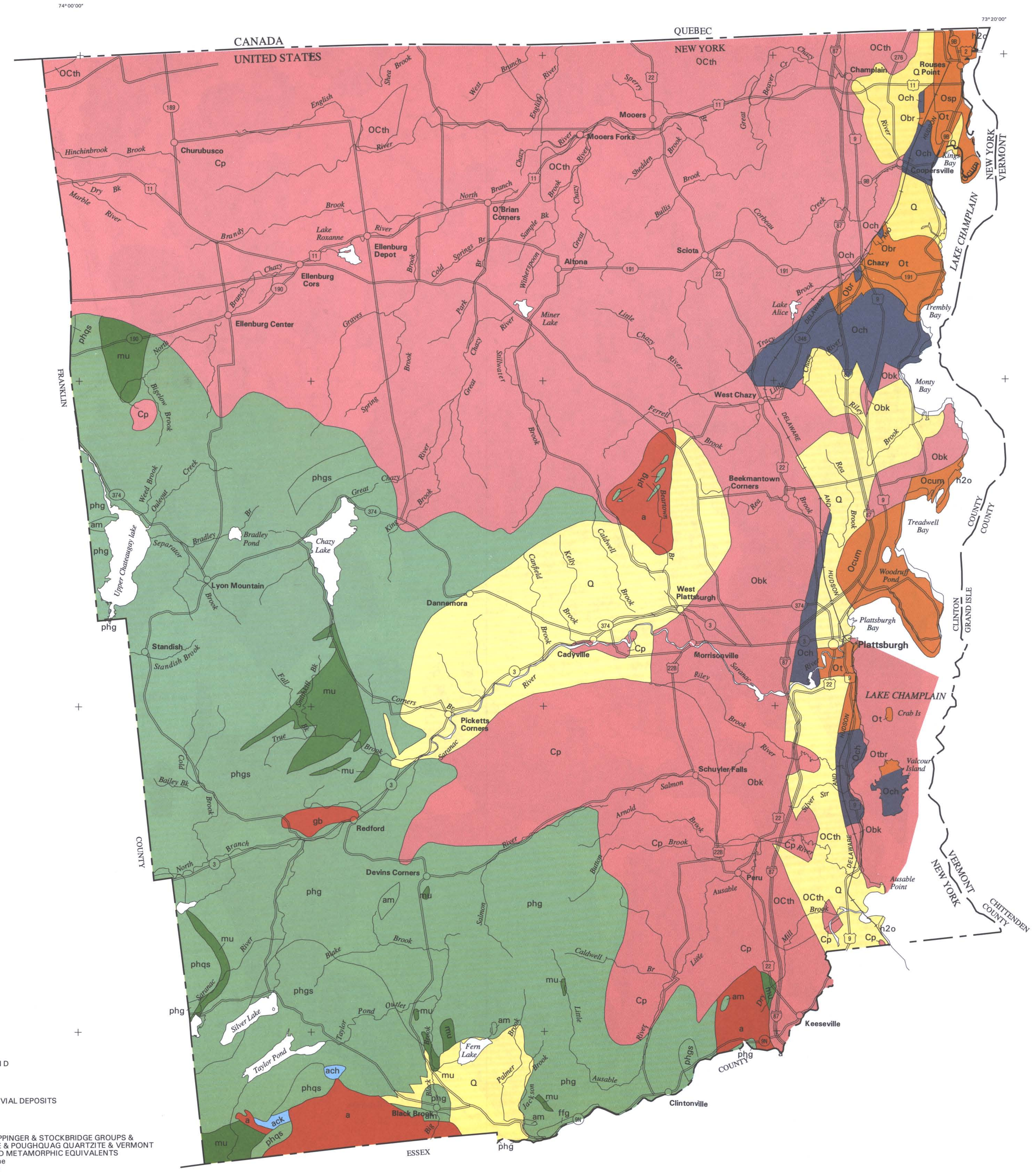
UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
CORNELL UNIVERSITY AGRICULTURAL EXPERIMENT STATION

GENERAL SOIL MAP
CLINTON COUNTY, NEW YORK

1 0 1 2 3 MILES

1 0 1 2 3 4 5 6 KILOMETERS

Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.



LEGEND

Q GLACIAL AND ALLUVIAL DEPOSITS

BEEKMANTOWN & WAPPINGER & STOCKBRIDGE GROUPS & POTSDAM SANDSTONE & POUGHQUAG QUARTZITE & VERMONT VALLEY SEQUENCE AND METAMORPHIC EQUIVALENTS
Cp Potsdam Sandstone
OCth Theresa Formation
Obk Beekmantown Group

LORRAINE & TRENTON & BLACK RIVER GROUPS AND METAMORPHIC EQUIVALENTS
Obr Black River Group
Osp Stony Point Shale
Ocum Cumberland Head Argillite
Ot Trenton Group
Otbr Dolgeville Formation

CHAZY GROUP
Och Valcour Limestone

METAMORPHIC ROCKS OF IGNEOUS ORIGIN
gb Olivine metagabbro
a metanorthosite and anorthositic gneiss

UNDIVIDED AND MIXED GNEISSES ADIRONDACKS
ach Hybrid rock: mangeritic to charnockitic gneiss
ack Interlayered gabbroic or noritic metanorthosite

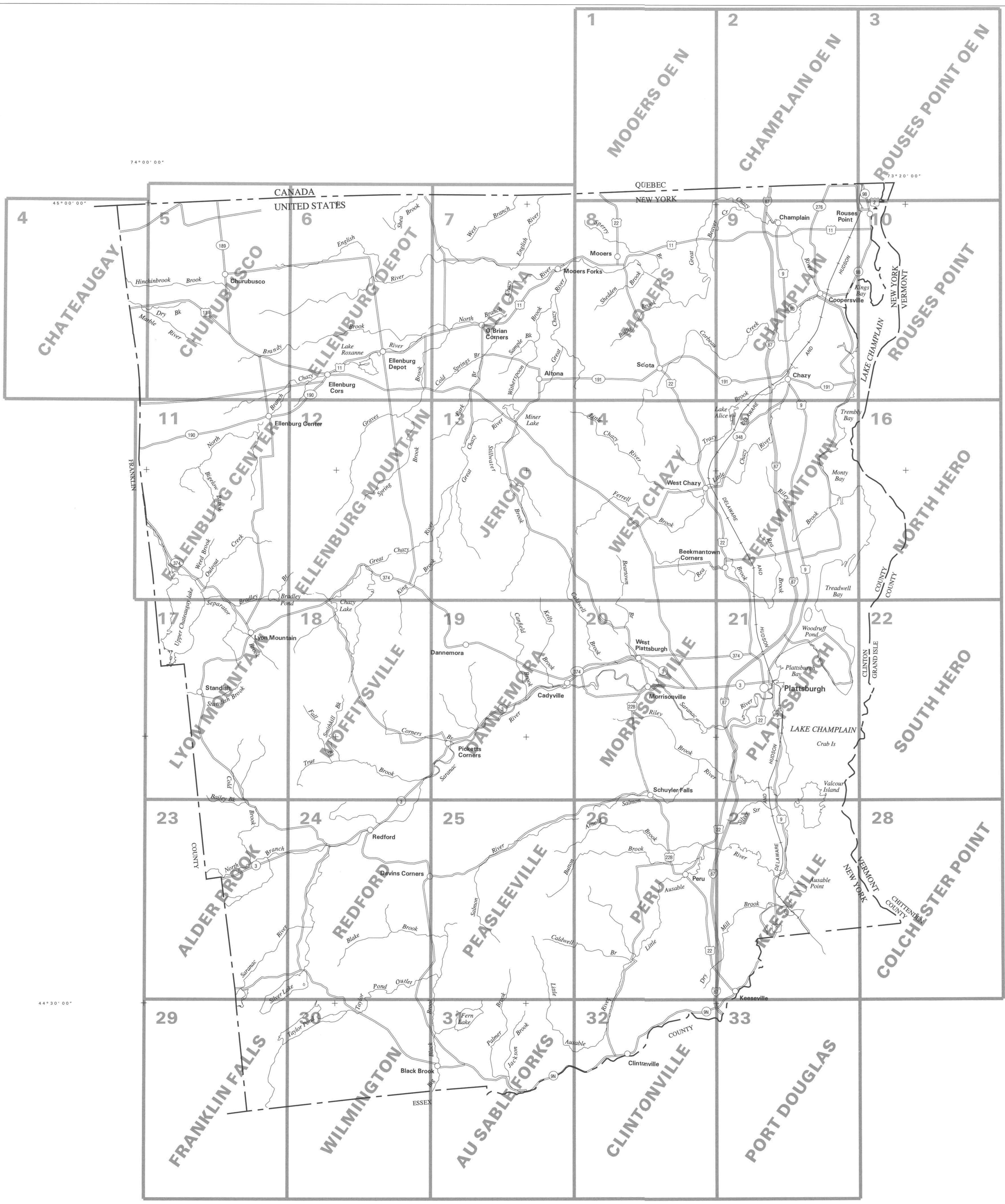
METAMORPHIC ROCKS OF UNCERTAIN ORIGIN ADIRONDACKS
ffg Ferrohedenbergite-fayalite granite and granite gneiss
phgs Charnockite, granitic and quartz syenite gneiss
phqs Charnockite, mangerite, pyroxene-quartz syenite gneiss
am Amphibolite, pyroxenic amphibolite
phg Leucogranite and granite gneiss

METAMORPHIC ROCKS OF SEDIMENTARY ORIGIN (PROBABLY INCLUDES SOME METAVOLCANICS) ADIRONDACKS
mu Undivided metasedimentary rock and related migmatite

BEDROCK GEOLOGY MAP
CLINTON COUNTY, NEW YORK

MILES 1 0 1 2 3
KILOMETERS 1 0 1 2 3 4 5 6

Source: Statewide Bedrock Geology, NYS Museum / NYS Geological Survey



INDEX TO MAP SHEETS
CLINTON COUNTY, NEW YORK

MILES

KILOMETERS

SOIL LEGEND

SYMBOL	NAME
15	Loxley Beseman complex
17	Beseman Rumney Loxley complex
367	Searsport Borosaprists Naumburg complex
375C	Colton Adams complex 3 to 15 percent slopes
375F	Colton Adams complex 35 to 70 percent slopes
651C	Monadnock Tunbridge Sabattis complex rolling very bouldery
651D	Monadnock Tunbridge complex hilly very bouldery
653C	Monadnock fine sandy loam 3 to 15 percent slopes very bouldery
654C	Monadnock Sabattis complex rolling very bouldery
655B	Sunapee Monadnock complex 3 to 15 percent slopes very bouldery
661C	Hermon fine sandy loam 3 to 15 percent slopes very bouldery
661D	Hermon fine sandy loam 15 to 35 percent slopes very bouldery
708B	Adirondack Sabattis Tughill complex 0 to 8 percent slopes very bouldery
721C	Becket Tunbridge Skerry complex 3 to 15 percent slopes very bouldery
721D	Becket Tunbridge complex 15 to 35 percent slopes very bouldery
723C	Becket fine sandy loam 3 to 15 percent slopes very bouldery
723D	Becket fine sandy loam 15 to 35 percent slopes very bouldery
725B	Skerry Becket complex 3 to 15 percent slopes very bouldery
727B	Skerry Adirondack complex 0 to 8 percent slopes very bouldery
831C	Tunbridge Lyman complex 3 to 15 percent slopes very rocky
831D	Tunbridge Lyman complex 15 to 35 percent slopes very rocky
831F	Tunbridge Lyman complex 35 to 60 percent slopes very rocky
861F	Lyman Ricker complex 35 to 60 percent slopes very rocky
931C	Mundalite Rawsonville Worden complex 3 to 15 percent slopes very bouldery
931D	Mundalite Rawsonville complex 15 to 35 percent slopes very bouldery
933C	Mundalite Worden complex 3 to 15 percent slopes very bouldery
941C	Rawsonville Hogback complex 3 to 15 percent slopes very rocky
941D	Rawsonville Hogback complex 15 to 35 percent slopes very rocky
941F	Rawsonville Hogback complex 35 to 60 percent slopes very rocky
943C	Rawsonville Borosaprists Ricker complex 0 to 25 percent slopes very rocky
945F	Hogback Ricker complex 35 to 60 percent slopes very rocky
949F	Rock outcrop Ricker Hogback complex 35 to 60 percent slopes very bouldery
991D	Glebe Skylight complex 15 to 35 percent slopes very rocky
997F	Ricker Skylight Rock outcrop complex 35 to 70 percent slopes very bouldery
AbA	Adams loamy sand 0 to 3 percent slopes
AbB	Adams loamy sand 3 to 8 percent slopes
AbC	Adams loamy sand 8 to 15 percent slopes
AbD	Adams loamy sand 15 to 25 percent slopes
AgB	Adirondack loam 3 to 8 percent slopes
AhB	Adirondack loam gently sloping very bouldery
Ak	Adjidaumo silty clay
Am	Adjidaumo mucky silty clay
AtA	Amenia fine sandy loam 0 to 3 percent slopes
AtB	Amenia fine sandy loam 3 to 8 percent slopes
AwA	Appleton loam 0 to 3 percent slopes
AwB	Appleton loam 3 to 8 percent slopes
BcB	Becket fine sandy loam 3 to 8 percent slopes
BcC	Becket fine sandy loam 8 to 15 percent slopes
BeC	Becket fine sandy loam strongly sloping very bouldery
BeD	Becket fine sandy loam moderately steep very bouldery
BgC	Becket Tunbridge complex strongly sloping very rocky
BgE	Becket Tunbridge complex steep very rocky
BhC	Benson loam strongly sloping very rocky
BhE	Benson loam steep very rocky
Bo	Beseman mucky peat
BrB	Bice fine sandy loam 3 to 8 percent slopes
BrC	Bice fine sandy loam 8 to 15 percent slopes
BsC	Bice fine sandy loam strongly sloping very stony
BsD	Bice fine sandy loam moderately steep very stony
BvB	Bombay loam 3 to 8 percent slopes
Bx	Bucksport mucky peat
CgA	Champlain fine sand 0 to 3 percent slopes
CgB	Champlain fine sand 3 to 8 percent slopes
CgC	Champlain fine sand 8 to 15 percent slopes
ChF	Champlain and Adams soils very steep
Ck	Churubusco muck

SYMBOL	NAME
ClC	Colosse Hermon complex strongly sloping very stony
CmB	Colosse Trout River complex gently sloping
CmC	Colosse Trout River complex strongly sloping
CnC	Colosse Trout River complex strongly sloping very stony
CnD	Colosse Trout River complex moderately steep very stony
CoA	Colton gravelly loamy coarse sand 0 to 3 percent slopes
CoB	Colton gravelly loamy coarse sand 3 to 8 percent slopes
CoC	Colton gravelly loamy coarse sand 8 to 15 percent slopes
CpC	Colton gravelly loamy coarse sand strongly sloping very stony
CpE	Colton gravelly loamy coarse sand steep very stony
Crk	Cook mucky loamy fine sand
Crr	Cornish silt loam
Cs	Covert loamy sand
CtsA	Covertfalls loamy fine sand 0 to 3 percent slopes
CtsB	Covertfalls loamy fine sand 3 to 8 percent slopes
CttB	Covertfalls gravelly loamy fine sand 3 to 8 percent slopes
CvA	Coveytown loamy sand 0 to 3 percent slopes
CvB	Coveytown loamy sand 3 to 8 percent slopes
CwB	Coveytown loamy sand gently sloping very stony
CxA	Croghan loamy fine sand 0 to 3 percent slopes
CxB	Croghan loamy fine sand 3 to 8 percent slopes
DeA	Deerfield fine sand 0 to 3 percent slopes
DeB	Deerfield fine sand 3 to 8 percent slopes
Df	Deinache fine sand
FeB	Fahey gravelly fine sandy loam 3 to 8 percent slopes loamy substratum
FhB	Fahey gravelly fine sandy loam gently sloping very stony
FkB	Fernlake cobbly loamy sand 3 to 8 percent slopes
FlB	Fernlake cobbly loamy sand gently sloping very bouldery
FlC	Fernlake cobbly loamy sand strongly sloping very bouldery
FlD	Fernlake cobbly loamy sand moderately steep very bouldery
FlF	Fernlake cobbly loamy sand very steep very bouldery
FmB	Flackville loamy fine sand 3 to 8 percent slopes
Fn	Fluvaquents Udifluvents complex frequently flooded
GfC	Gardenisle Benson complex strongly sloping rocky
Gl	Gougeville mucky loamy fine sand
GrA	Grattan loamy sand 0 to 3 percent slopes
GrB	Grattan loamy sand 3 to 8 percent slopes
GvB	Grenville loam 3 to 8 percent slopes
GwC	Grenville loam strongly sloping very stony
Ha	Hailesboro silt loam
HeB	Hermon fine sandy loam 3 to 8 percent slopes
HeC	Hermon fine sandy loam 8 to 15 percent slopes
HfC	Hermon fine sandy loam strongly sloping very bouldery
HfD	Hermon fine sandy loam moderately steep very bouldery
HgC	Hermon Adirondack complex strongly sloping very bouldery
HlB	Heuvelton silty clay loam 3 to 8 percent slopes
HlD	Heuvelton silty clay loam 15 to 25 percent slopes
HoA	Hogansburg loam 0 to 3 percent slopes
HoB	Hogansburg loam 3 to 8 percent slopes
HrB	Hogansburg loam gently sloping very stony
InB	Irona Conic complex gently sloping very rocky
Jn	Junius fine sand
KhB	Kalurah fine sandy loam 3 to 8 percent slopes
KlB	Kalurah fine sandy loam gently sloping very stony
Kr	Kingsbury Rhinebeck complex
Ld	Lovewell very fine sandy loam stratified substratum
Le	Loxley mucky peat
LtF	Lyman Tunbridge Rock outcrop complex very steep
Lv	Lyonmounten loam
Ly	Lyonmounten loam very stony
MaB	Madrid fine sandy loam 3 to 8 percent slopes
MaC	Madrid fine sandy loam 8 to 15 percent slopes
MeA	Malone gravelly loam 0 to 3 percent slopes
MeB	Malone gravelly loam 3 to 8 percent slopes
MfB	Malone gravelly loam gently sloping very stony
Mk	Markey muck
Mn	Massena fine sandy loam

SYMBOL	NAME
Mp	Medomak silt loam stratified substratum
Ms	Mino loam
MtB	Monadnock fine sandy loam 3 to 8 percent slopes
MtC	Monadnock fine sandy loam 8 to 15 percent slopes
MuC	Monadnock fine sandy loam strongly sloping very bouldery
MuD	Monadnock fine sandy loam moderately steep very bouldery
MuF	Monadnock fine sandy loam very steep very bouldery
MvA	Mooers loamy sand 0 to 3 percent slopes
MvB	Mooers loamy sand 3 to 8 percent slopes
MwA	Muskellunge silty clay loam 0 to 3 percent slopes
MwB	Muskellunge silty clay loam 3 to 8 percent slopes
NeC	Neckrock Summerville complex strongly sloping very rocky
NoB	Nicholville very fine sandy loam 3 to 8 percent slopes
NrA	Northway loamy fine sand 0 to 3 percent slopes
NrB	Northway loamy fine sand 3 to 8 percent slopes
OcA	Occur loamy sand 0 to 3 percent slopes
OcB	Occur loamy sand 3 to 8 percent slopes
OgB	Ogdensburg silt loam 0 to 8 percent slopes
PeA	Peasleeville loam 0 to 3 percent slopes
PeB	Peasleeville loam 3 to 8 percent slopes
PfB	Peasleeville loam gently sloping very stony
Pg	Pinconning mucky loamy fine sand
Ph	Pipestone fine sand
Pn	Pits gravel
Po	Pits quarry
Pp	Pits sand
PtA	Plainfield loamy sand 0 to 3 percent slopes
PtB	Plainfield loamy sand 3 to 8 percent slopes
PtC	Plainfield loamy sand 8 to 15 percent slopes
PvF	Plainfield and Grattan soils very steep
RoB	Rock outcrop Ricker complex gently sloping
Rr	Roundabout silt loam
Ry	Runeberg mucky loam
Sb	Sabattis mucky fine sandy loam very bouldery
Se	Saprists and Aquents ponded
ShB	Schroon fine sandy loam 3 to 8 percent slopes
ShC	Schroon fine sandy loam 8 to 15 percent slopes
SkB	Schroon fine sandy loam gently sloping very stony
Sn	Sciota fine sand
So	Shaker loam
SpB	Sheddenbrook gravelly loamy fine sand 3 to 8 percent slopes
SrB	Skerry fine sandy loam 3 to 8 percent slopes
SsB	Skerry fine sandy loam gently sloping very bouldery
SsC	Skerry fine sandy loam strongly sloping very bouldery
StD	Success cobbly sandy loam moderately steep very bouldery
SwB	Sunapee fine sandy loam 3 to 8 percent slopes
SxB	Sunapee fine sandy loam gently sloping very bouldery
Sz	Swanton very fine sandy loam
TcB	Topknot Chazy complex gently sloping rocky
TnC	Tunbridge Lyman complex strongly sloping very rocky
TnE	Tunbridge Lyman complex steep very rocky
Ud	Udipsamments and Psammaquents smoothed
Ue	Udipsamments mine spoil non acid
Uf	Udorthents refuse substratum
Ug	Udorthents smoothed
Uh	Udorthents wet substratum
Un	Urban land
UpA	Urban land Plainfield complex nearly level
UpB	Urban land Plainfield complex gently sloping
WdB	Waddington gravelly loam 3 to 8 percent slopes
Wn	Wainola loamy fine sand
WsB	Wallace fine sand 3 to 8 percent slopes
WsC	Wallace fine sand 8 to 15 percent slopes
WsE	Wallace fine sand 25 to 35 percent slopes
Wu	Wonsqueak muck
W	Water
Za	Denied access

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

CULTURAL FEATURES

BOUNDARIES

- National state or province
- County or parish
- Minor civil division
- Reservation (national forest or park state forest or park)
- Land grant
- Limit of soil survey (label) and/or denied access area
- Field sheet matchline & neatline
- Previously Published Survey

OTHER BOUNDARY (label)

- Airport airfield
- Cemetery
- City/county park

STATE COORDINATE TICK
1 890 000 FEET

LAND DIVISION CORNER
(section and land grants)

GEOGRAPHIC COORDINATE TICK

TRANSPORTATION

- Divided roads
- Other roads
- Trail

ROAD EMBLEM AND DESIGNATIONS

- Interstate 173 79 345
- Federal 287 0 22
- State 52 52 347
- County farm or ranch 1283

RAILROAD

POWER TRANSMISSION LINE

PIPELINE

FENCE

LEVEES

- Without road
- With road
- With railroad
- Single side slope (showing actual feature location)

DAMS

- Medium or Small

LANDFORM FEATURES

- Prominent hill or peak
- Soil Sample Site

MISCELLANEOUS CULTURAL FEATURES

- Farmstead house
- Church
- School
- Other Religion Mt Cormel
- Located object Ranger Station
- Tank Petroleum
- Lookout Tower
- Oil and/or Natural Gas Wells
- Windmill
- Lighthouse

HYDROGRAPHIC FEATURES

STREAMS

- Perennial stream double line
- Perennial stream single line
- Intermittent stream
- Drainage end

DRAINAGE AND IRRIGATION

- Double-line canal (label) CANAL
- Perennial drainage and/or irrigation ditch
- Intermittent drainage and/or irrigation ditch

SMALL LAKES PONDS AND RESERVOIRS

- Perennial water
- Miscellaneous water
- Flood pool line FLOOD POOL LINE

MISCELLANEOUS WATER FEATURES

- Spring
- Well artesian
- Well irrigation

SPECIAL SYMBOLS FOR SOIL SURVEY AND SSURGO

SOIL DELINEATIONS AND SYMBOLS 1 16

LANDFORM FEATURES

- Bedrock escarpment
- Other than bedrock escarpment
- Short steep slope
- Gully
- Depression closed
- Sinkhole

PITS

- Borrow pits
- Gravel pit
- Mine or quarry
- Landfill

MISCELLANEOUS SURFACE FEATURES

- Blowout
- Clay spot
- Gravelly spot
- Lava flow
- Marsh or swamp
- Rock outcrop (includes sandstone and shale)
- Saline spot
- Sandy spot
- Severely eroded spot
- Slide or slip
- Sodic spot
- Spoil area
- Stony spot
- Very stony spot
- Wet spot

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLINTON COUNTY, NEW YORK
MOOERS OE N QUADRANGLE
SHEET NUMBER 1 OF 33

(Joins sheet 8, Mooers)

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

1 0 1
KILOMETERS

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
MILES

1	2	3	1
			2
			3
4		5	4 ALTONA OE N
			5 CHAMPLAIN OE N
			6 ALTONA
6	7	8	7 MOOERS
			8 CHAMPLAIN

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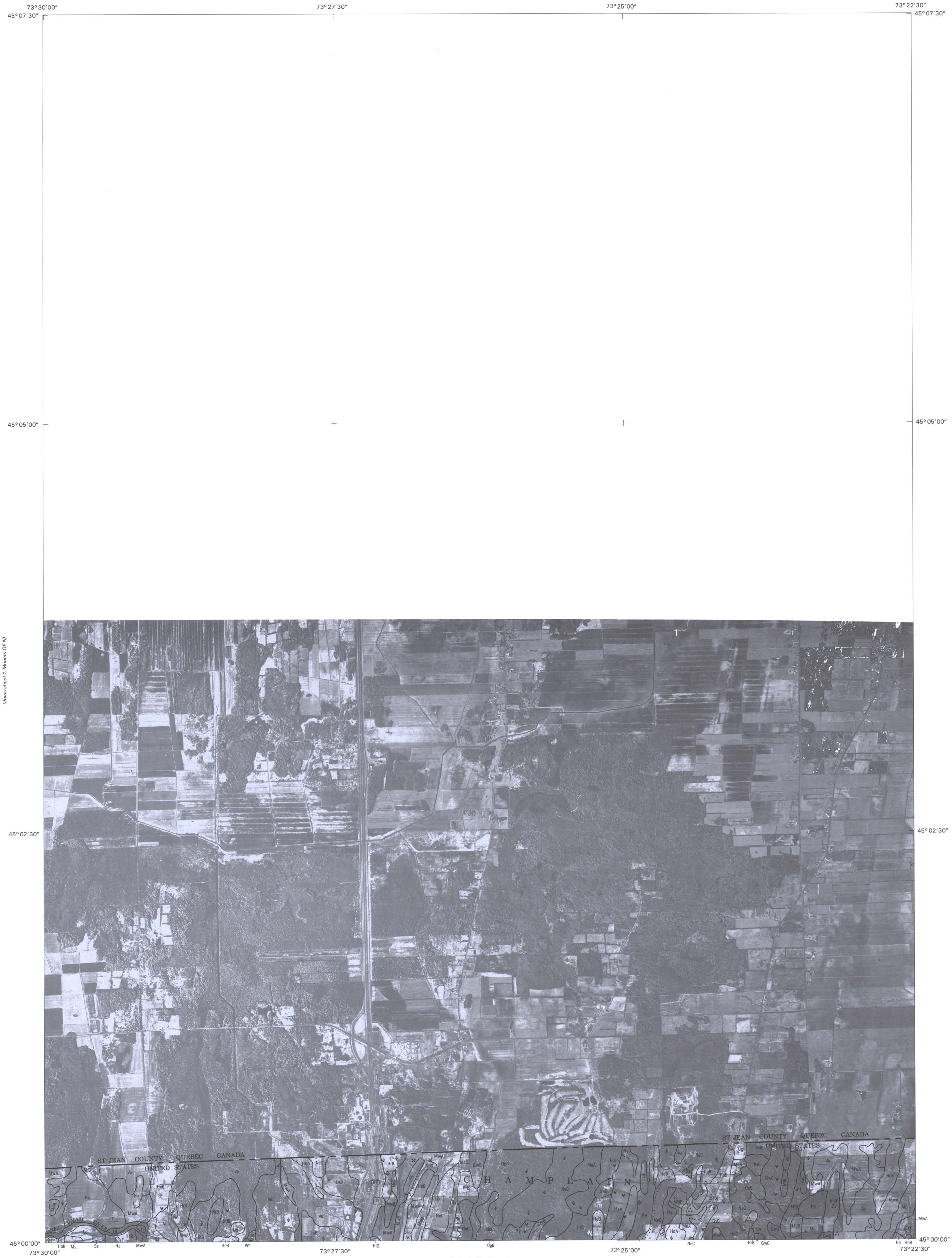
MOOERS OE N, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 1 OF 33



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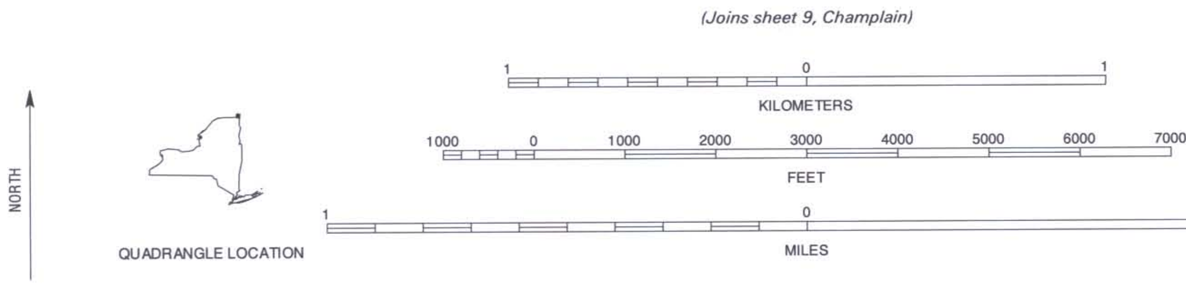
North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



1	2	3	
4		5	
6	7	8	

1
2
3
4 MOOERS OE N
5 ROUSES POINT OE N
6 MOOERS
7 CHAMPLAIN
8 ROUSES POINT

INDEX TO ADJOINING 7.5 MAPS

CHAMPLAIN OE N, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 2 OF 33

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

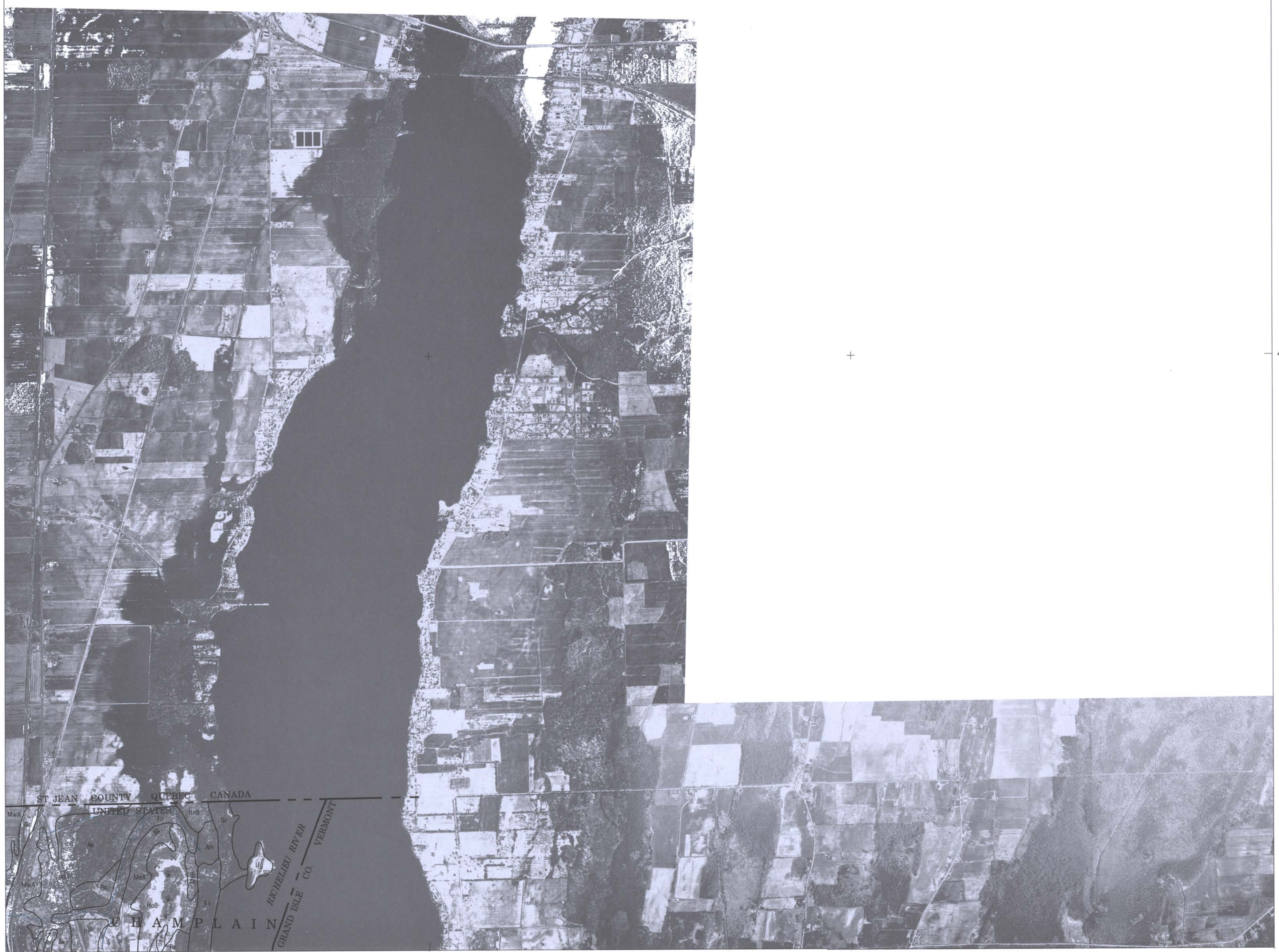
73° 22'30" 73° 20'00" 73° 17'30" 73° 15'00"

45° 07'30" 45° 07'30"

45° 05'00" 45° 05'00"

45° 02'30" 45° 02'30"

(Joins sheet 2, Champlain OE N)



45° 00'00" 45° 00'00"

73° 22'30" MwA MeA 73° 20'00" 73° 17'30" 73° 15'00"

(Joins sheet 10, Rouses Point)

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

1 0 1
KILOMETERS

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
MILES

1	2	3
4		5
6	7	8

1
2
3
4 CHAMPLAIN OE N
5 EAST ALBURG OE N
6 CHAMPLAIN
7 ROUSES POINT
8 EAST ALBURG

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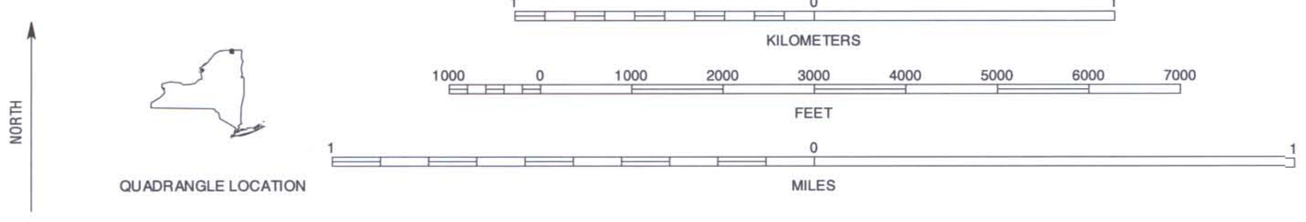
ROUSES POINT OE N, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 3 OF 33

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLINTON COUNTY, NEW YORK
CHATEAUGAY QUADRANGLE
SHEET NUMBER 4 OF 33

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



1	2	3
4		5
6	7	8

1
2
3 CHURUBUSCO OE N
4 BURKE
5 CHURUBUSCO
6 CHASM FALLS
7 BRAINARDSVILLE
8 ELLENBURG CENTER

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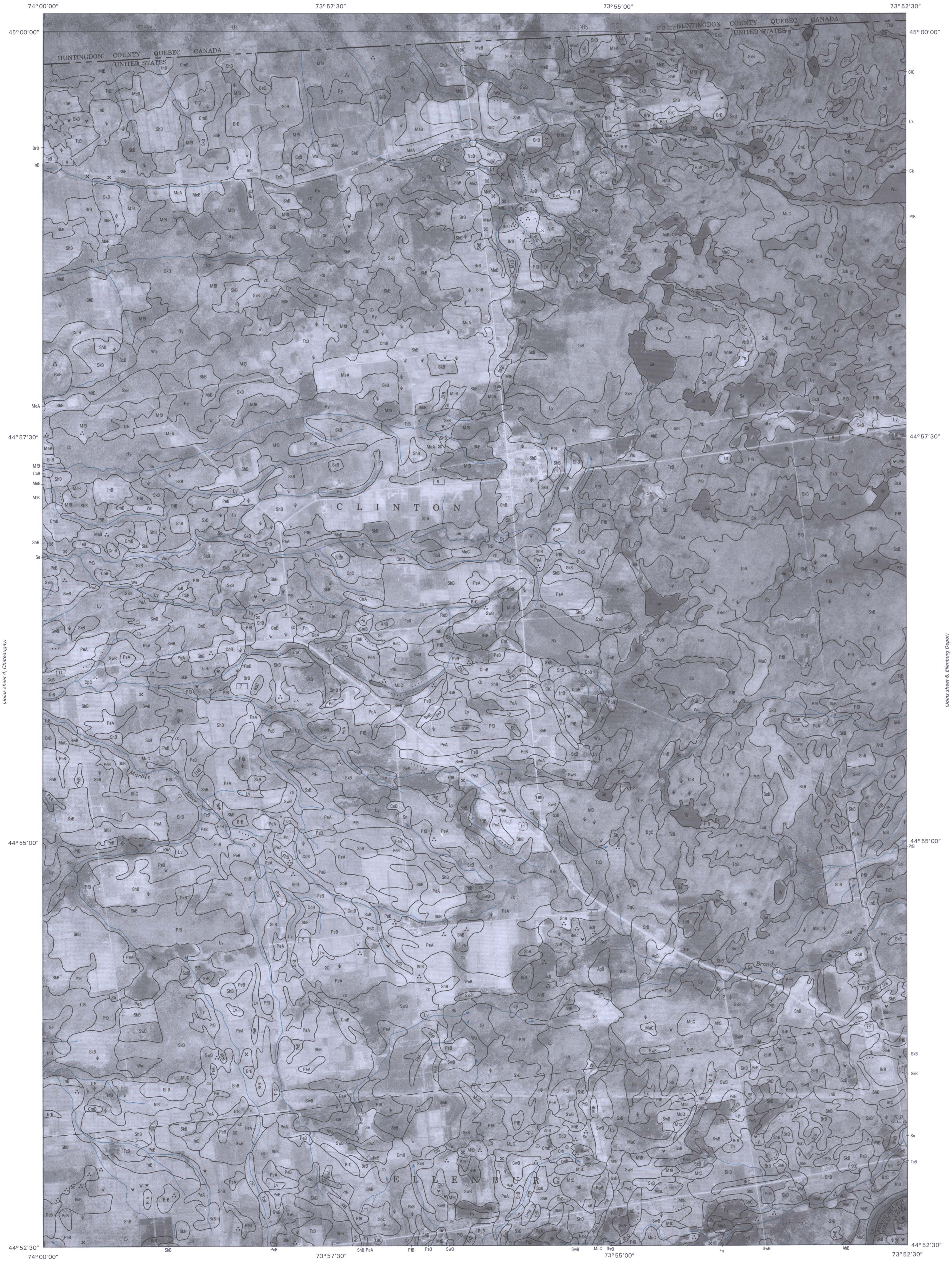
7.5 MINUTE SERIES
SHEET NUMBER 4 OF 33

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLINTON COUNTY, NEW YORK
CHURUBUSCO QUADRANGLE
SHEET NUMBER 5 OF 33



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

KILOMETERS 1 0 1

FEET 1000 0 1000 2000 3000 4000 5000 6000 7000

MILES 1 0 1

1	2	3
4		5
6	7	8

1
2 CHURUBUSCO OE N
3 ELLENBURG DEPOT OE N
4 CHATEAUGAY
5 ELLENBURG DEPOT
6 BRAINARDSVILLE
7 ELLENBURG CENTER
8 ELLENBURG MOUNTAIN

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CHURUBUSCO, NEW YORK
7.5 MINUTE SERIES
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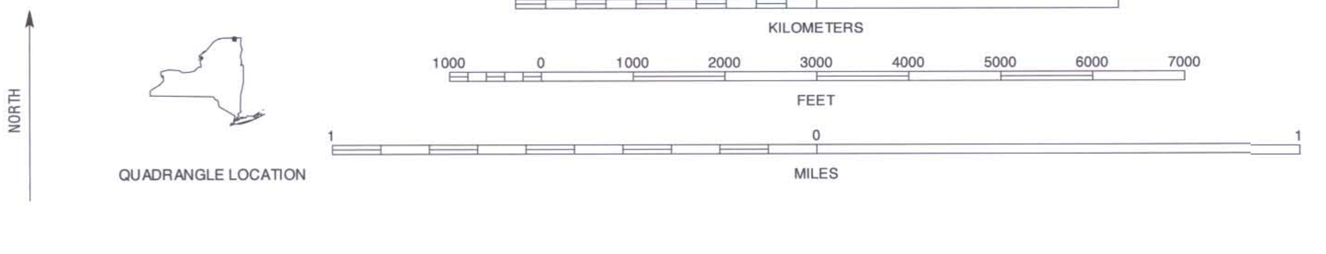
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLINTON COUNTY, NEW YORK
ELLENBURG DEPOT QUADRANGLE
SHEET NUMBER 6 OF 33

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



1	2	3
4		5
6	7	8

1 CHURUBUSCO OE N
2 ELLENBURG DEPOT OE N
3 ALTONA OE N
4 CHURUBUSCO
5 ALTONA
6 ELLENBURG CENTER
7 ELLENBURG MOUNTAIN
8 JERICHO

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ELLENBURG DEPOT, NEW YORK
7.5 MINUTE SERIES
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UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLINTON COUNTY, NEW YORK
ALTONA QUADRANGLE
SHEET NUMBER 7 OF 33

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

NORTH

QUADRANGLE LOCATION

KILOMETERS

FEET

MILES

1	2	3
4		5
6	7	8

1 ELLENBURG DEPOT OE N
2 ALTONA OE N
3 MOOERS OE N
4 ELLENBURG DEPOT
5 MOOERS
6 ELLENBURG MOUNTAIN
7 JERICHO
8 WEST CHAZY

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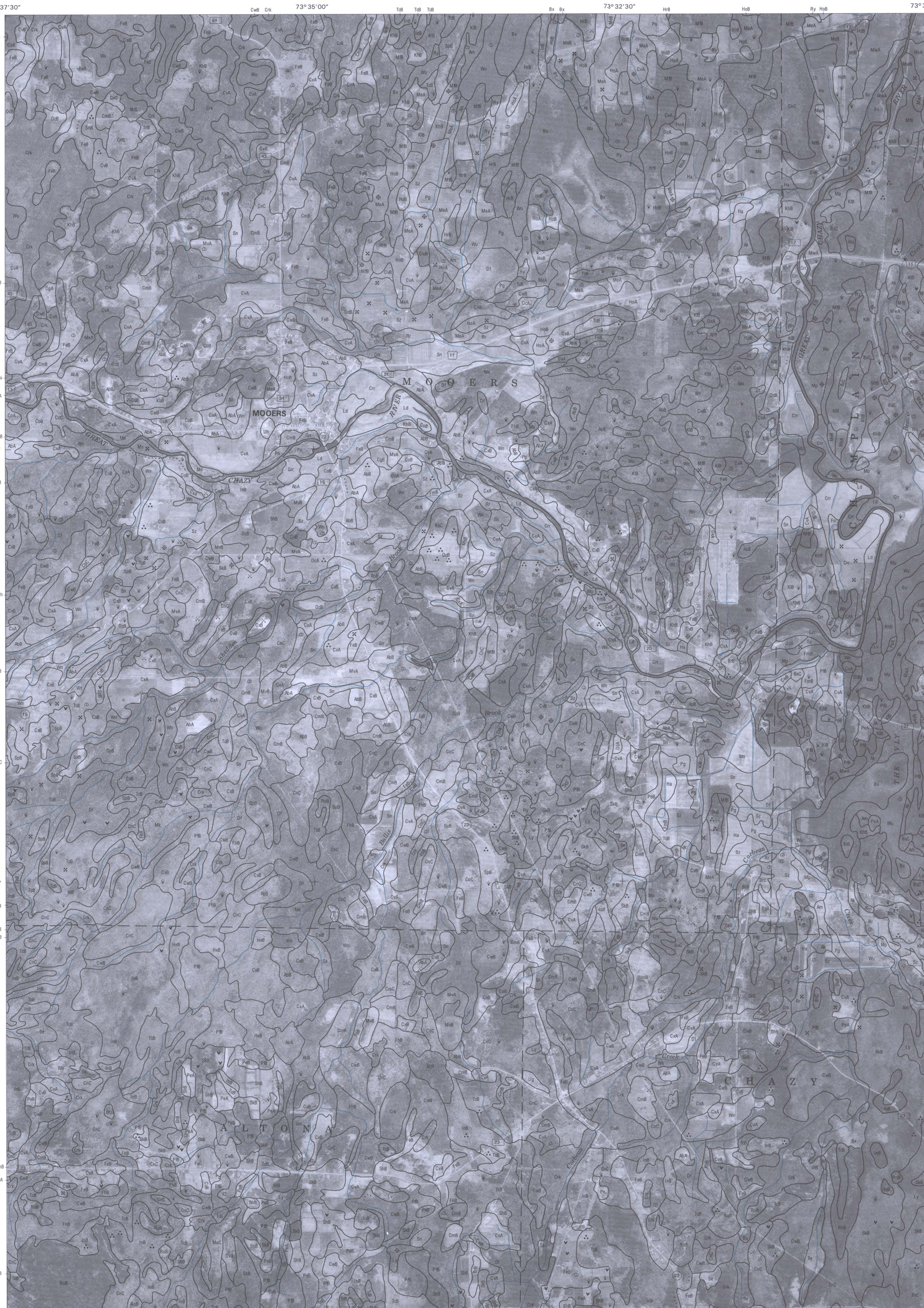
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLINTON COUNTY, NEW YORK
MOOERS QUADRANGLE
SHEET NUMBER 8 OF 33

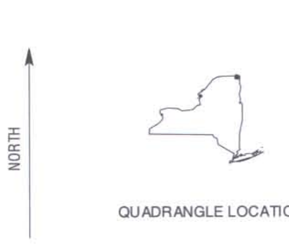
(Joins sheet 1, Mooers OE N)

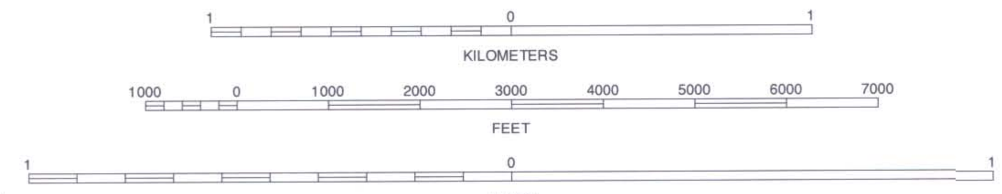


(Joins sheet 14, West Chazy)

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





1	2	3
4		5
6	7	8

1 ALTONA OE N
2 MOOERS OE N
3 CHAMPLAIN OE N
4 ALTONA
5 CHAMPLAIN
6 JERICHO
7 WEST CHAZY
8 BEEKMANTOWN

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MOOERS, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 8 OF 33

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLINTON COUNTY, NEW YORK
CHAMPLAIN QUADRANGLE
SHEET NUMBER 9 OF 33

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

1 0 1
KILOMETERS

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
MILES

1	2	3
4		5
6	7	8

1 MOOERS OE N
2 CHAMPLAIN OE N
3 ROUSES POINT OE N
4 MOOERS
5 ROUSES POINT
6 WEST CHAZY
7 BEEKMANTOWN
8 NORTH HERO

INDEX TO ADJOINING 7.5 MAPS

CHAMPLAIN, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 9 OF 33

(Joins sheet 3, Rouses Point OE N)

73°22'30" 73°20'00" 73°17'30" 73°15'00"

45°00'00" 45°00'00"

44°57'30" 44°57'30"

44°55'00" 44°55'00"

(Joins sheet 9, Champlain)

44°52'30" 44°52'30"

73°22'30" 73°20'00" 73°17'30" 73°15'00"

(Joins sheet 16, North Hero)

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

1 0 1
KILOMETERS

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
MILES

1	2	3
4		5
6	7	8

1 CHAMPLAIN OE N
2 ROUSES POINT OE N
3 EAST ALBURG OE N
4 CHAMPLAIN
5 EAST ALBURG
6 BEEKMANTOWN
7 NORTH HERO
8 SAINT ALBANS BAY

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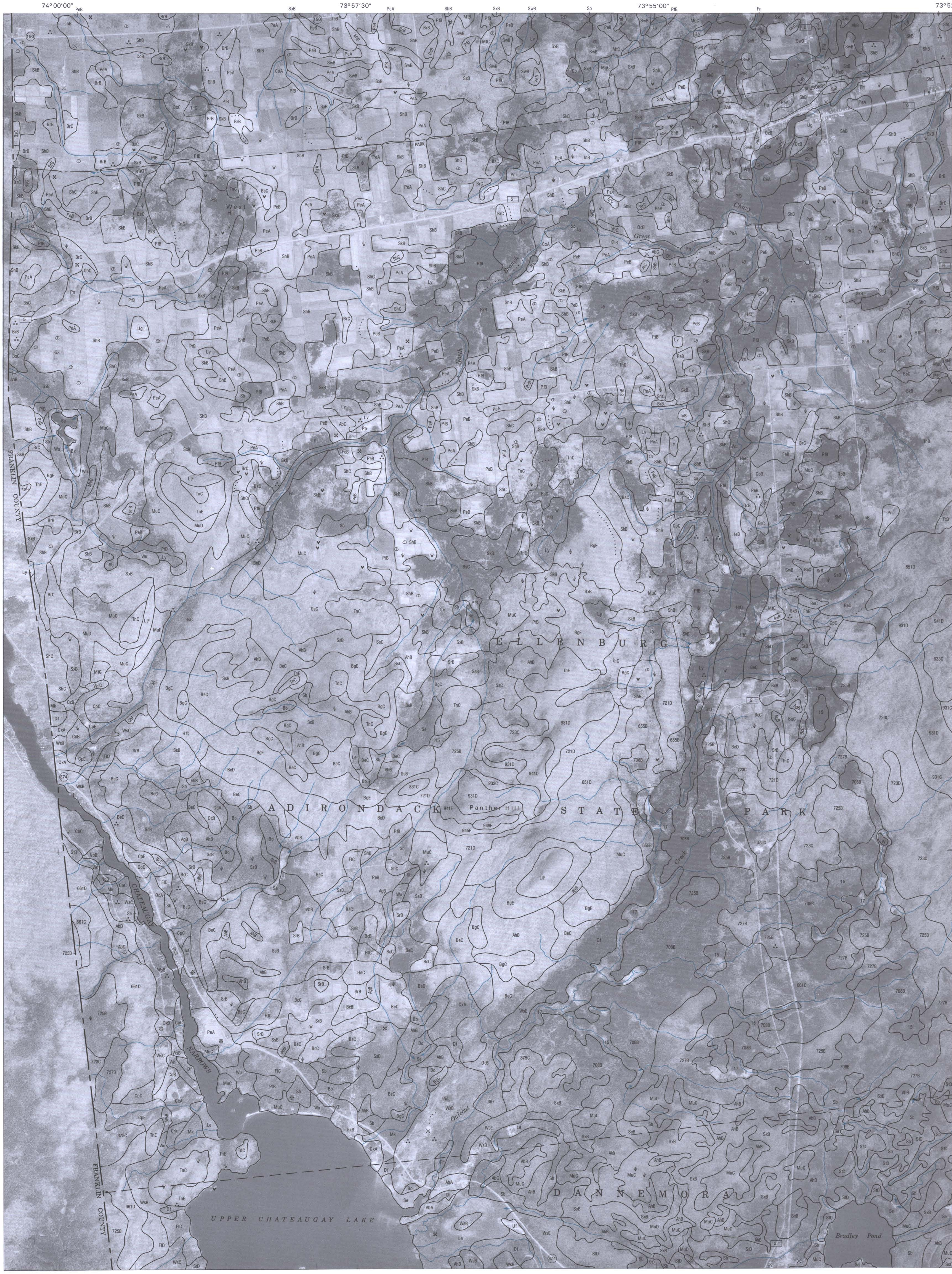
ROUSES POINT, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 10 OF 33

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

(Joins sheet 5, Churubusco)



(Joins sheet 17, Lyon Mountain)

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North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

1 0 1
KILOMETERS

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
MILES

1	2	3
4		5
6	7	8

1 CHATEAUGAY
2 CHURUBUSCO
3 ELLENBURG DEPOT
4 BRAINARDSVILLE
5 ELLENBURG MOUNTAIN
6 RAGGED LAKE
7 LYON MOUNTAIN
8 MOFFITSVILLE

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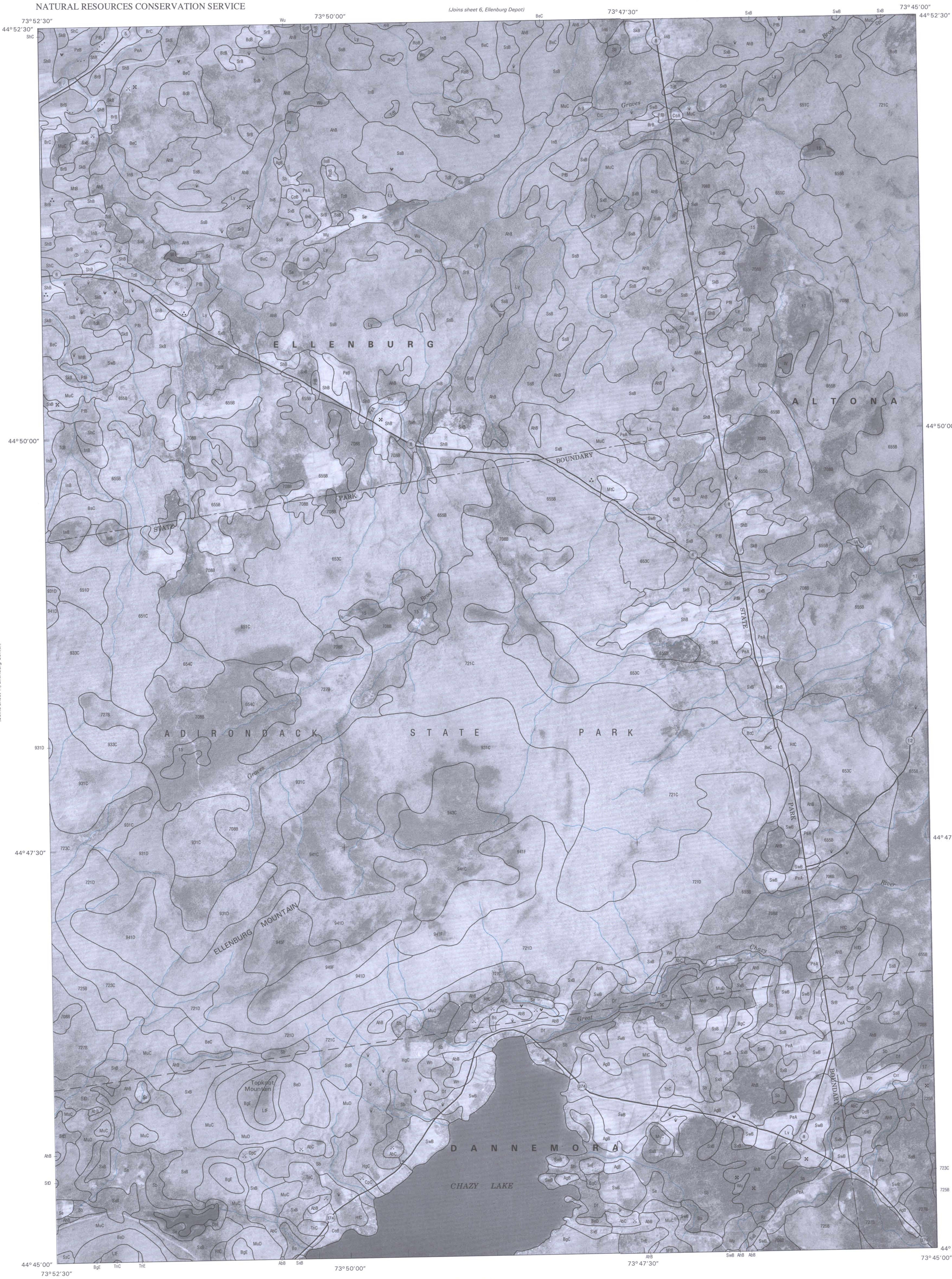
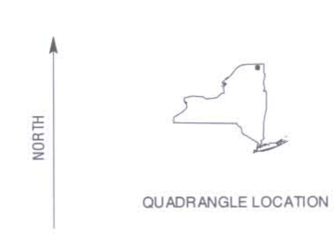
ELLENBURG CENTER, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 11 OF 33

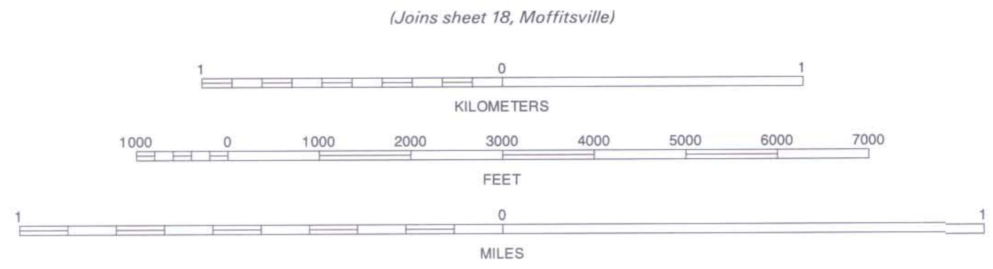
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1972 aerial photography. Hydrography and culture information were acquired from U.S. Geological Survey data; therefore, some features may not align exactly with base imagery.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





1	2	3
4		5
6	7	8

1 CHURUBUSCO
2 ELLENBURG DEPOT
3 ALTONA
4 ELLENBURG CENTER
5 JERICHO
6 LYON MOUNTAIN
7 MOFFITSVILLE
8 DANNEMORA

INDEX TO ADJOINING 7.5 MAPS

ELLENBURG MOUNTAIN, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 12 OF 33

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

(Joins sheet 7, Altona)

(Joins sheet 19, Dannemora)

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

KILOMETERS

FEET

MILES

1	2	3
4		5
6	7	8

1 ELLENBURG DEPOT
2 ALTONA
3 MOOERS
4 ELLENBURG MOUNTAIN
5 WEST CHAZY
6 MOFFITSVILLE
7 DANNEMORA
8 MORRISONVILLE

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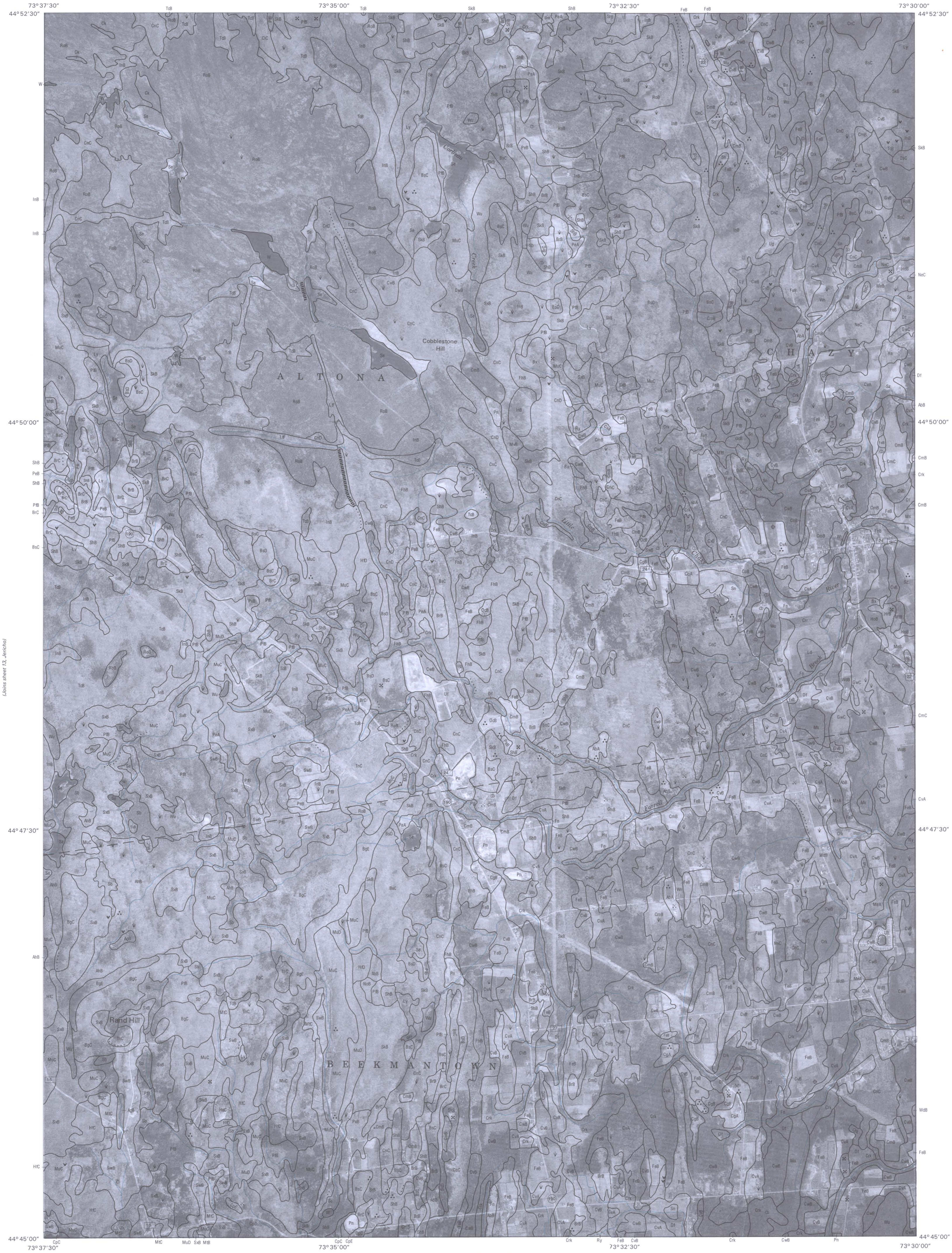
JERICHO, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 13 OF 33

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLINTON COUNTY, NEW YORK
WEST CHAZY QUADRANGLE
SHEET NUMBER 14 OF 33



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

1 0 1
KILOMETERS

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
MILES

1 ALTONA
2 MOOERS
3 CHAMPLAIN
4 JERICHO
5 BEEKMANTOWN
6 DANNEMORA
7 MORRISONVILLE
8 PLATTSBURGH

INDEX TO ADJOINING 7.5 MAPS

WEST CHAZY, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 14 OF 33

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLINTON COUNTY, NEW YORK
BEEKMANTOWN QUADRANGLE
SHEET NUMBER 15 OF 33

(Joins sheet 9, Champlain)

(Joins sheet 21, Plattsburgh)

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

KILOMETERS

FEET

MILES

1	2	3
4		5
6	7	8

1 MOOERS
2 CHAMPLAIN
3 ROUSES POINT
4 WEST CHAZY
5 NORTH HERO
6 MORRISONVILLE
7 PLATTSBURGH
8 SOUTH HERO

INDEX TO ADJOINING 7.5 MAPS

BEEKMANTOWN, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 15 OF 33

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

KILOMETERS

FEET

MILES

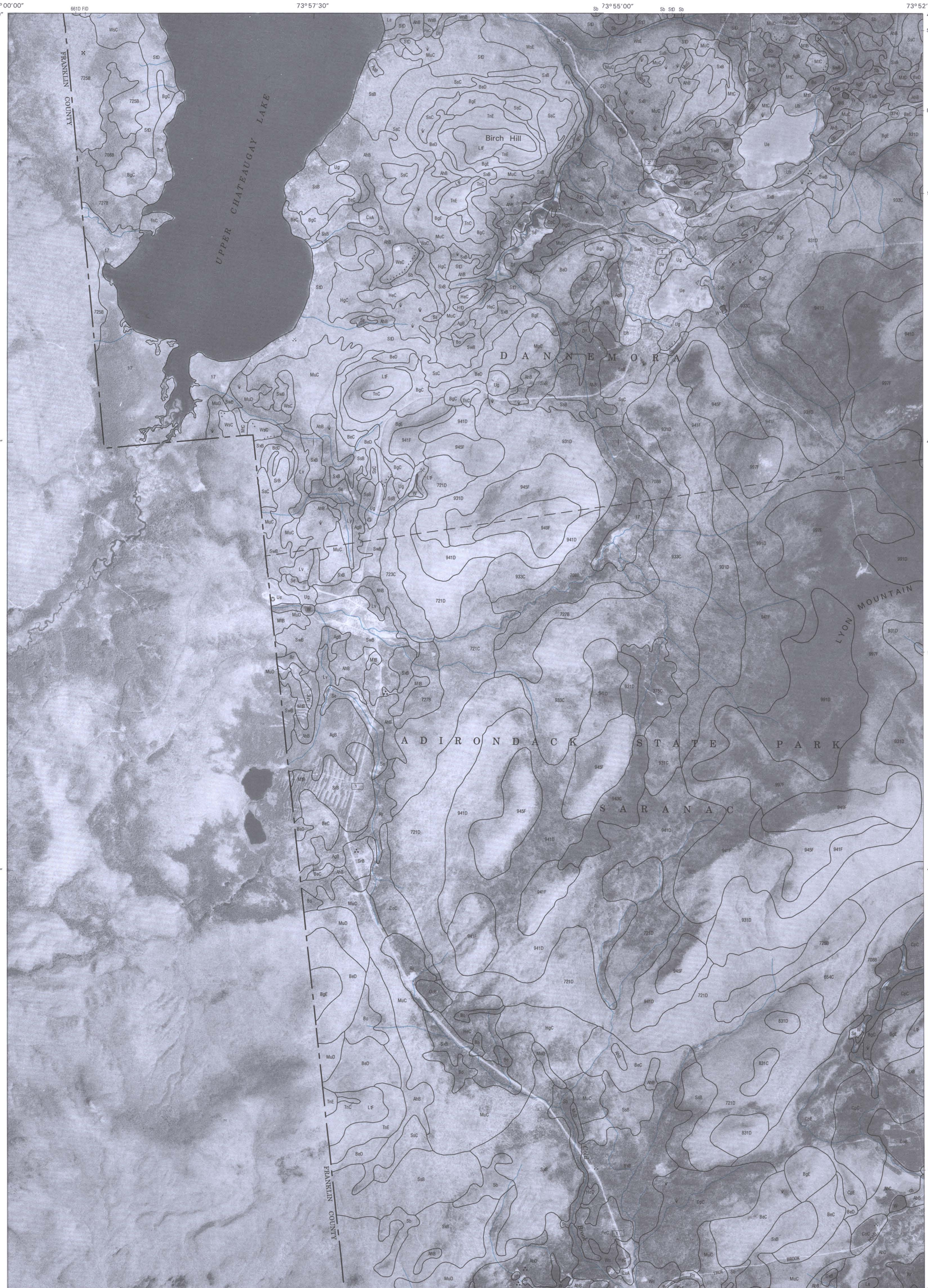
1	2	3
4		5
6	7	8

1 CHAMPLAIN
2 ROUSES POINT
3 EAST ALBURG
4 BEEKMANTOWN
5 SAINT ALBANS BAY
6 PLATTSBURGH
7 SOUTH HERO
8 GEORGIA PLAINS

INDEX TO ADJOINING 7.5 MAPS

NORTH HERO, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 16 OF 33

(Joins sheet 11, Ellenburg Center)

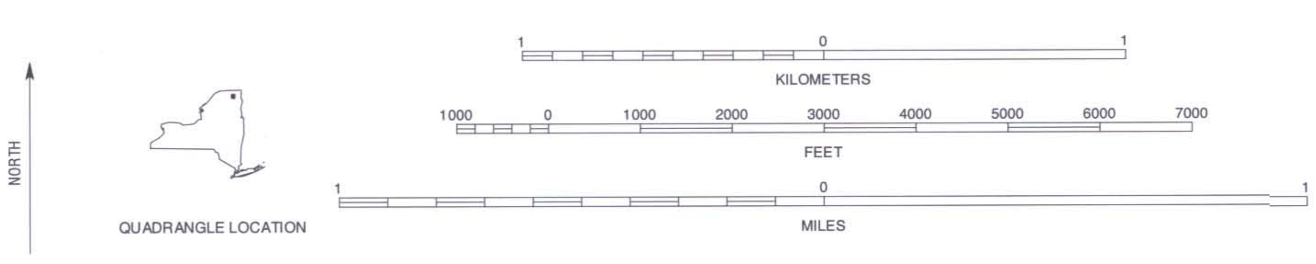


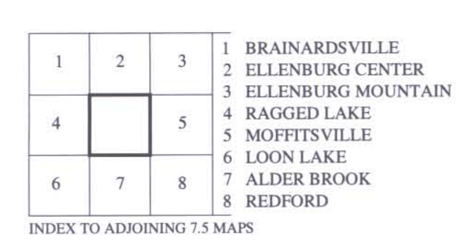
(Joins sheet 18, Moffitsville)

(Joins sheet 23, Alder Brook)

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





LYON MOUNTAIN, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 17 OF 33

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

(Joins sheet 12, Ellenburg Mountain)

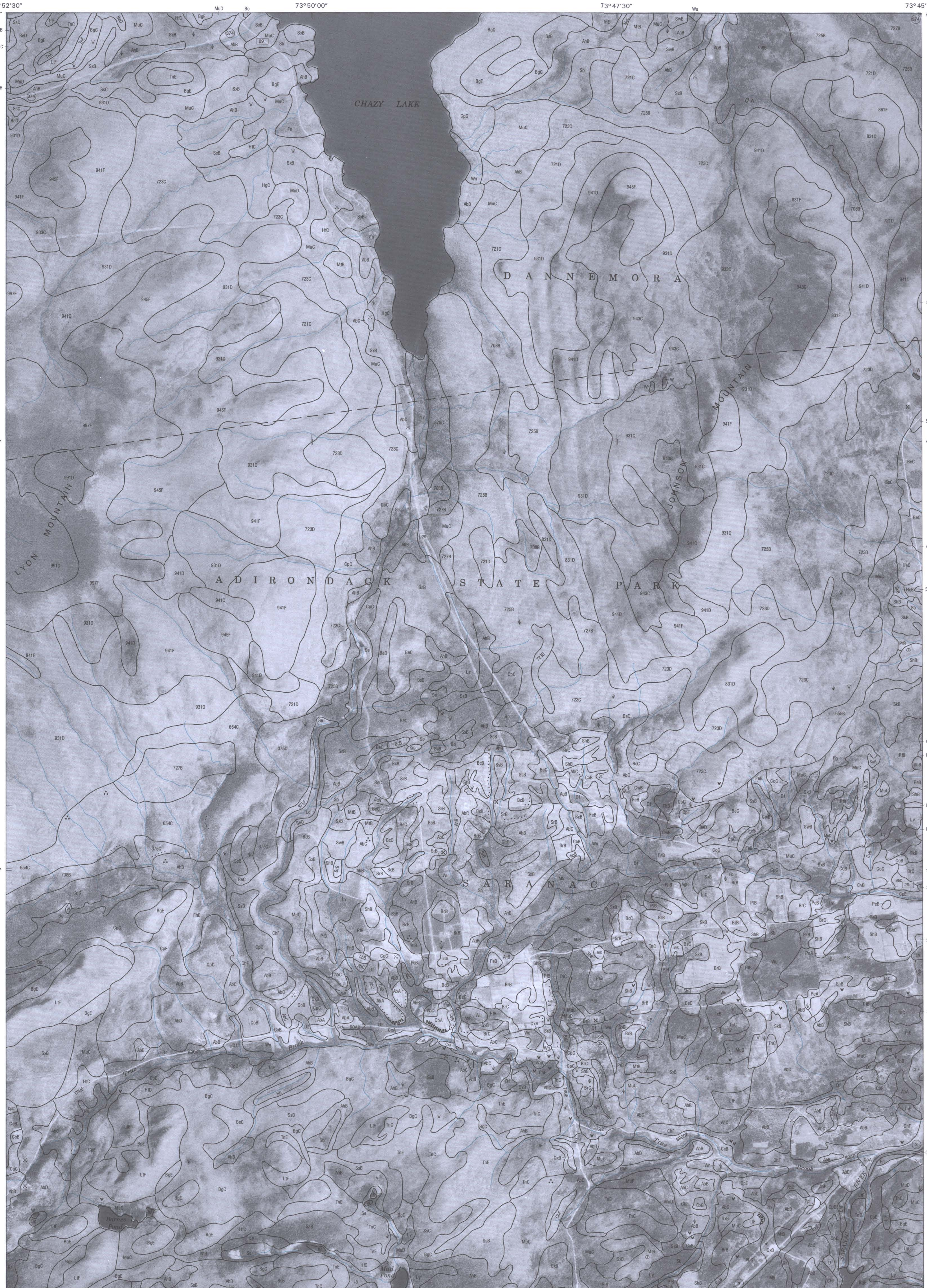
73° 52′30″ 44° 45′00″ — 73° 50′00″ — 73° 47′30″ — 73° 45′00″ 44° 45′00″

(Joins sheet 17, Lyon Mountain)

(Joins sheet 19, Dannemora)

44° 42′30″

44° 40′00″



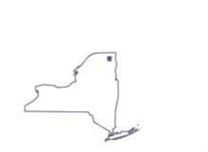
44° 37′30″ 73° 52′30″ — 73° 50′00″ — 73° 47′30″ — 73° 45′00″ 44° 37′30″

(Joins sheet 24, Redford)

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION

1 0 1
KILOMETERS

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
MILES

1	2	3
4		5
6	7	8

1 ELLENBURG CENTER
2 ELLENBURG MOUNTAIN
3 JERICHO
4 LYON MOUNTAIN
5 DANNEMORA
6 ALDER BROOK
7 REDFORD
8 PEASLEEVILLE

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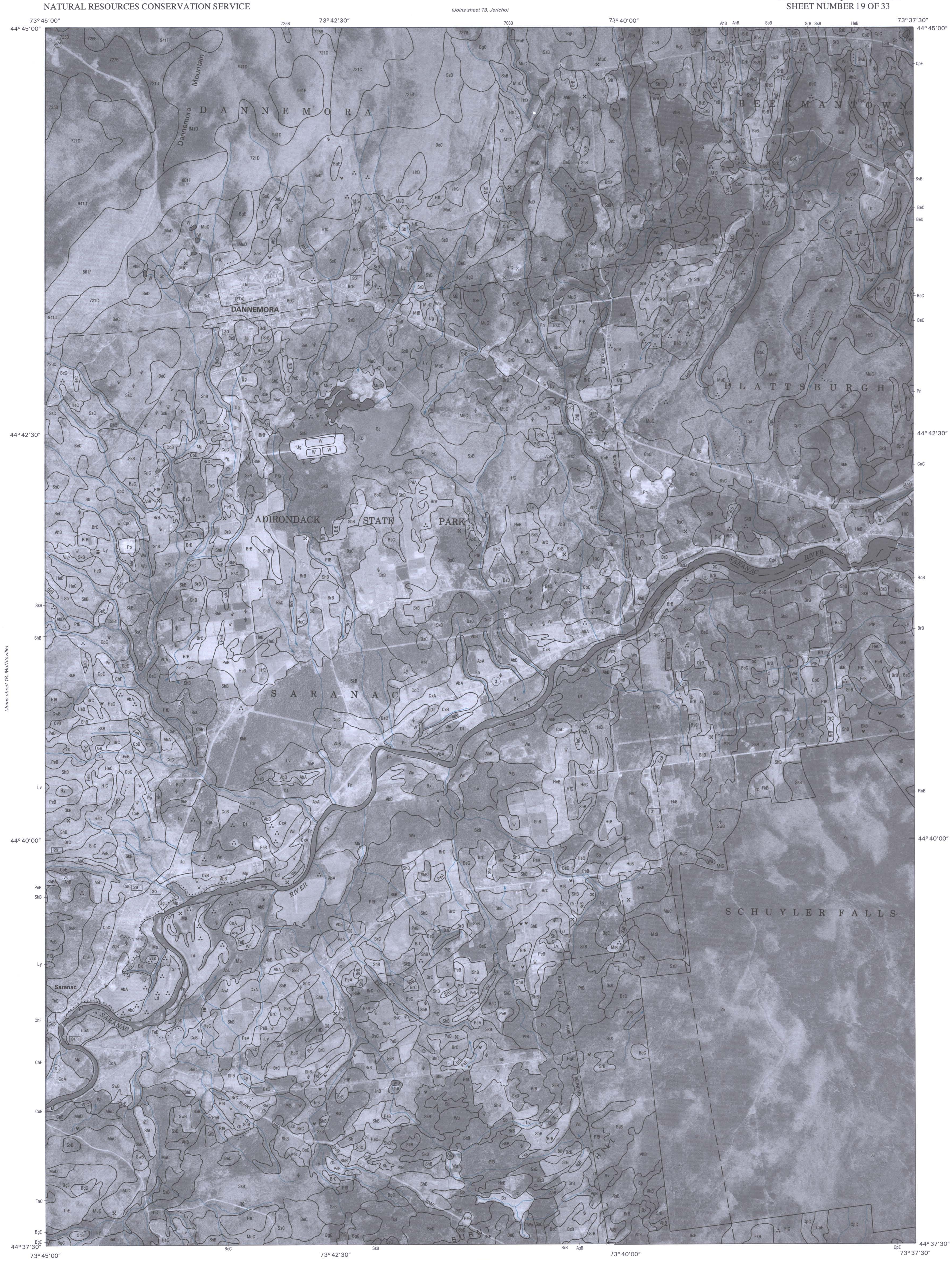
MOFFITSVILLE, NEW YORK

7.5 MINUTE SERIES
SHEET NUMBER 18 OF 33

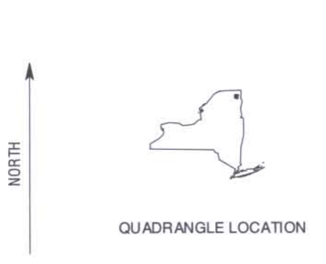
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLINTON COUNTY, NEW YORK
DANNEMORA QUADRANGLE
SHEET NUMBER 19 OF 33

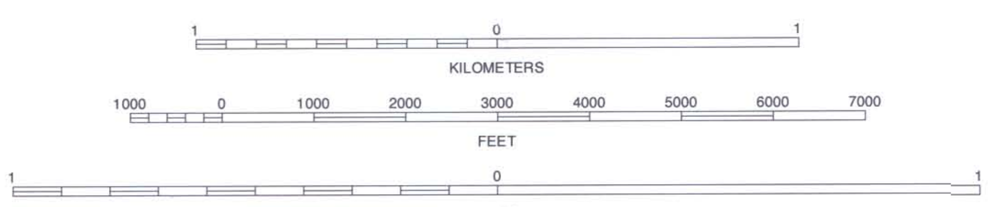


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



1	2	3
4		5
6	7	8

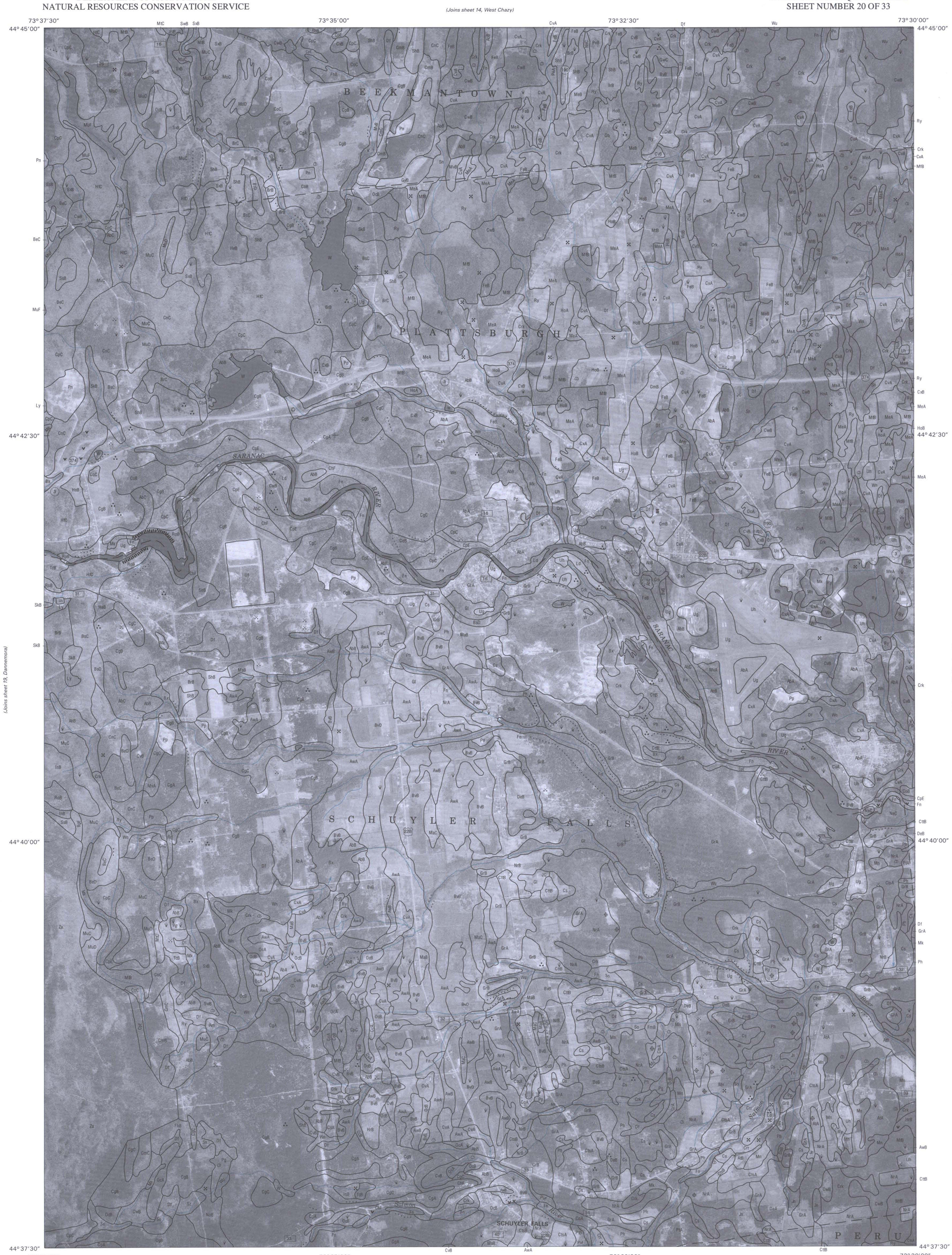
1 ELLENBURG MOUNTAIN
2 JERICHO
3 WEST CHAZY
4 MOFFITSVILLE
5 MORRISONVILLE
6 REDFORD
7 PEASLEEVILLE
8 PERU

INDEX TO ADJOINING 7.5 MAPS

DANNEMORA, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 19 OF 33

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLINTON COUNTY, NEW YORK
MORRISONVILLE QUADRANGLE
SHEET NUMBER 20 OF 33



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North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

1 0 1
KILOMETERS

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
MILES

1	2	3
4		5
6	7	8

1 JERICHO
2 WEST CHAZY
3 BEEKMANTOWN
4 DANNEMORA
5 PLATTSBURGH
6 PEASLEEVILLE
7 PERU
8 KEESEVILLE

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MORRISONVILLE, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 20 OF 33

(Joins sheet 15, Beekmantown)

(Joins sheet 27, Keeseville)

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

KILOMETERS 1 0 1

FEET 1000 0 1000 2000 3000 4000 5000 6000 7000

MILES 1 0 1

1	2	3
4		5
6	7	8

1 WEST CHAZY
2 BEEKMANTOWN
3 NORTH HERO
4 MORRISONVILLE
5 SOUTH HERO
6 PERU
7 KEESEVILLE
8 COLCHESTER POINT

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PLATTSBURGH, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 21 OF 33

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

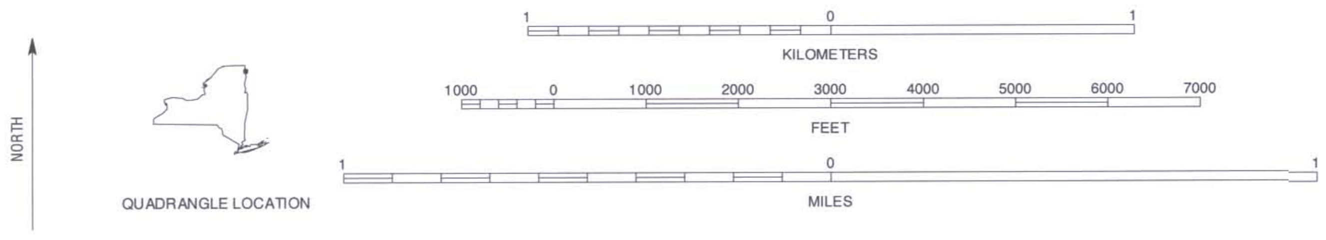
(Joins sheet 16, North Hero)

(Joins sheet 21, Plattsburgh)

(Joins sheet 28, Colchester Point)

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



1	2	3
4		5
6	7	8

1 BEEKMANTOWN
2 NORTH HERO
3 SAINT ALBANS BAY
4 PLATTSBURGH
5 GEORGIA PLAINS
6 KEESEVILLE
7 COLCHESTER POINT
8 COLCHESTER

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SOUTH HERO, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 22 OF 33

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLINTON COUNTY, NEW YORK
ALDER BROOK QUADRANGLE
SHEET NUMBER 23 OF 33

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

KILOMETERS

FEET

MILES

1	2	3
4		5
6	7	8

1 RAGGED LAKE
2 LYON MOUNTAIN
3 MOFFITSVILLE
4 LOON LAKE
5 REDFORD
6 BLOOMINGDALE
7 FRANKLIN FALLS
8 WILMINGTON

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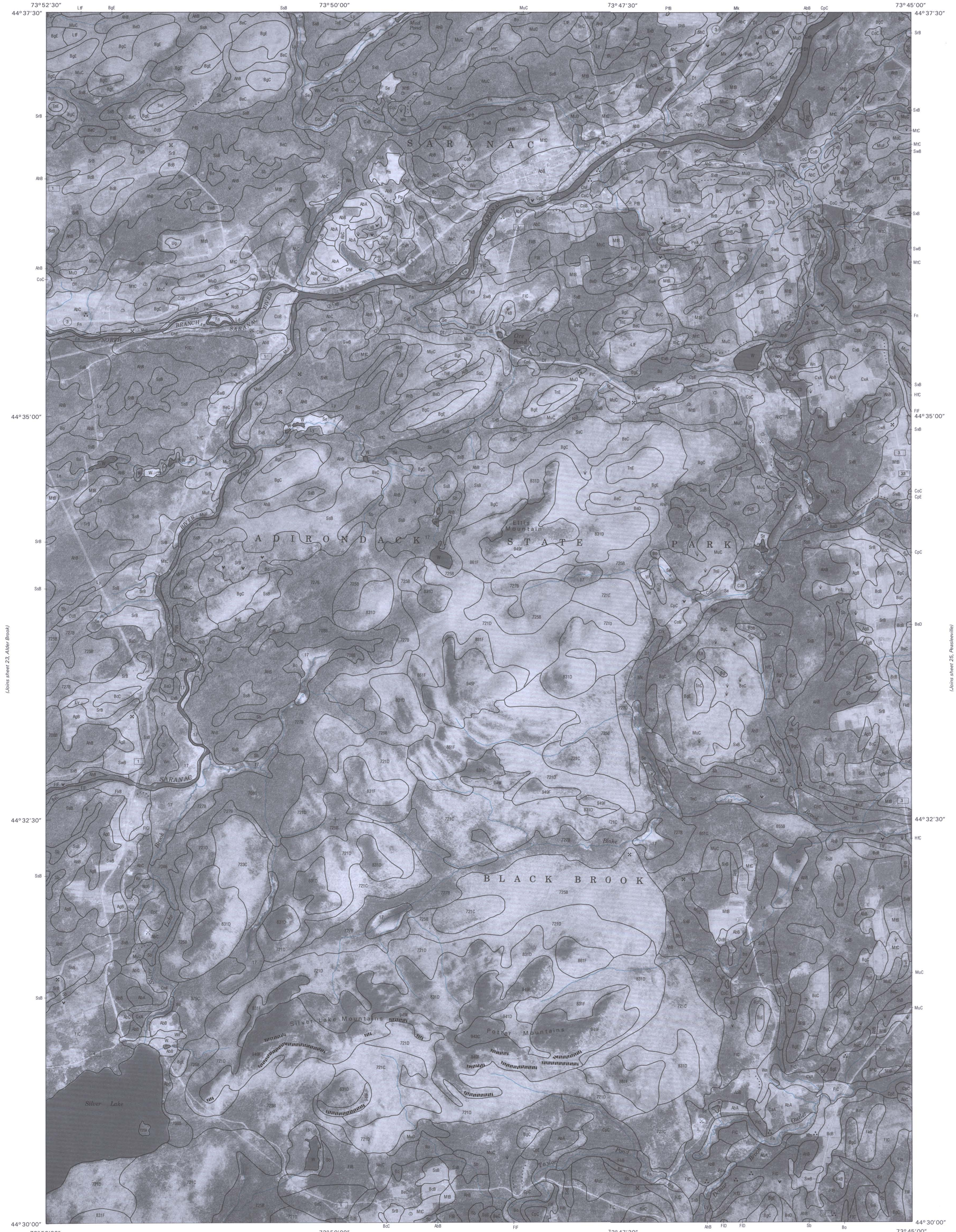
ALDER BROOK, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 23 OF 33

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLINTON COUNTY, NEW YORK
REDFORD QUADRANGLE
SHEET NUMBER 24 OF 33



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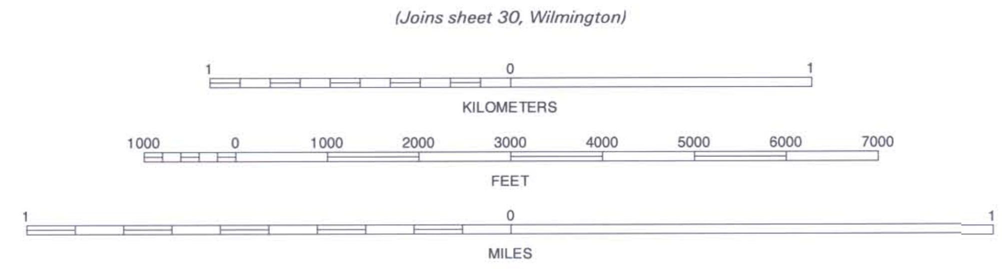
North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

QUADRANGLE LOCATION



1	2	3	1 LYON MOUNTAIN
4		5	2 MOFFITSVILLE
6	7	8	3 DANNEMORA

4 ALDER BROOK
5 PEASLEEVILLE
6 FRANKLIN FALLS
7 WILMINGTON
8 AU SABLE FORKS

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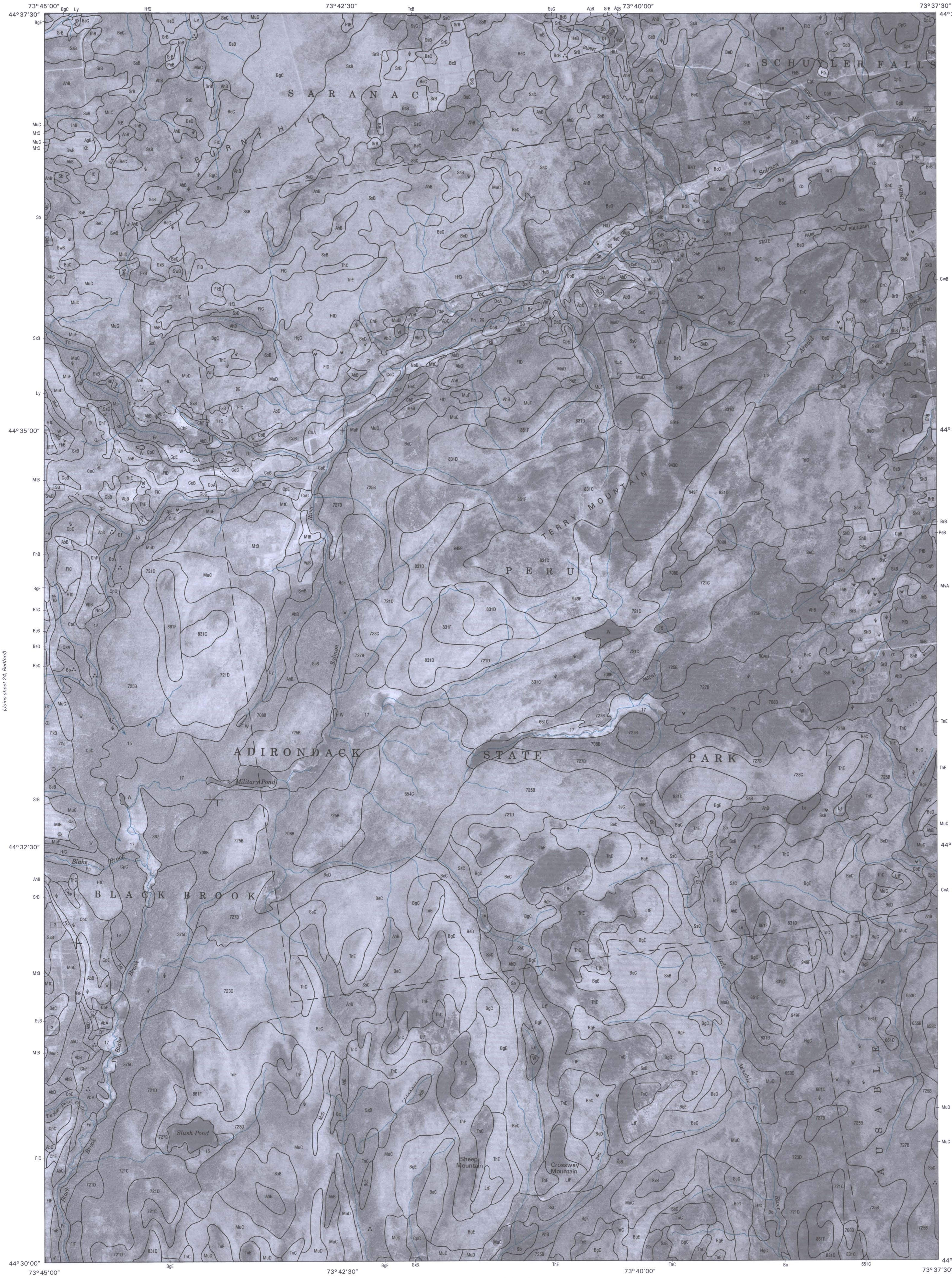
REDFORD, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 24 OF 33

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLINTON COUNTY, NEW YORK
PEASLEEVILLE QUADRANGLE
SHEET NUMBER 25 OF 33



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North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

KILOMETERS

FEET

MILES

1	2	3
4		5
6	7	8

1 MOFFITSVILLE
2 DANNEMORA
3 MORRISONVILLE
4 REDFORD
5 PERU
6 WILMINGTON
7 AU SABLE FORKS
8 CLINTONVILLE

INDEX TO ADJOINING 7.5 MAPS

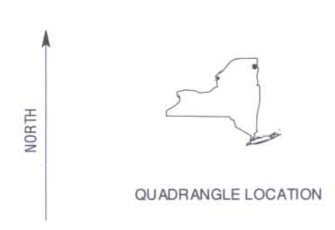
PEASLEEVILLE, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 25 OF 33

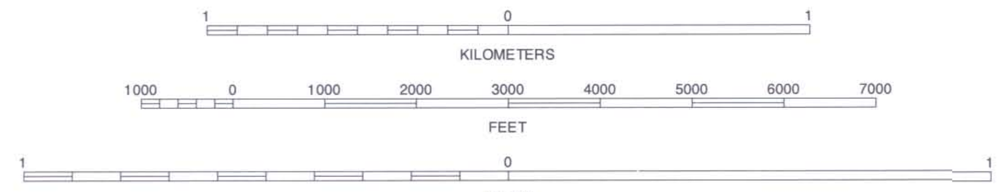
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLINTON COUNTY, NEW YORK
PERU QUADRANGLE
SHEET NUMBER 26 OF 33

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





1 DANNEMORA
2 MORRISONVILLE
3 PLATTSBURGH
4 PEASLEEVILLE
5 KEESEVILLE
6 AU SABLE FORKS
7 CLINTONVILLE
8 PORT DOUGLAS

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PERU, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 26 OF 33

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

(Joins sheet 21, Plattsburgh)

(Joins sheet 33, Port Douglas)

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

1 0 1
KILOMETERS

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
MILES

1	2	3
4		5
6	7	8

1 MORRISONVILLE
2 PLATTSBURGH
3 SOUTH HERO
4 PERU
5 COLCHESTER POINT
6 CLINTONVILLE
7 PORT DOUGLAS
8 JUNIPER ISLAND

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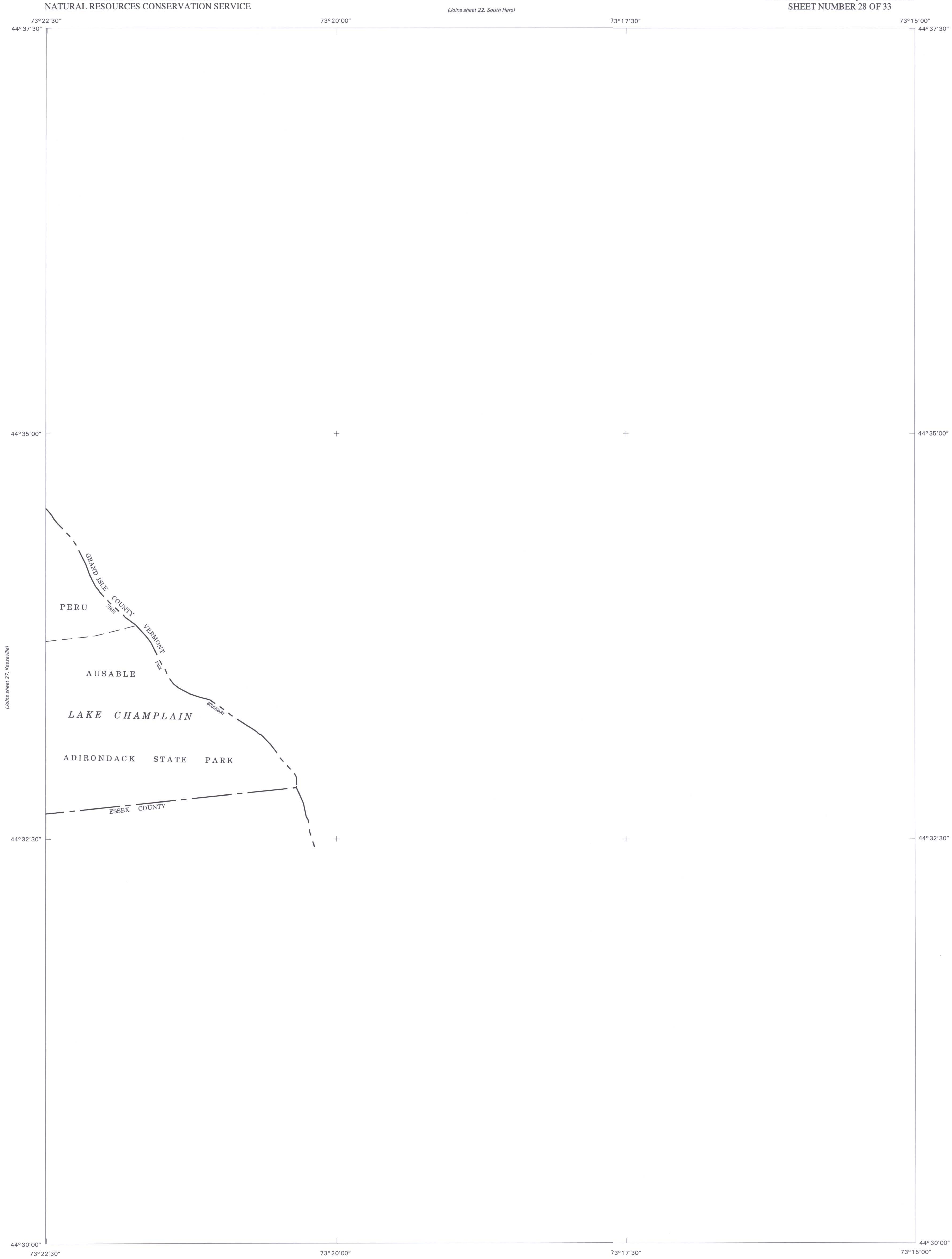
KEESEVILLE, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 27 OF 33

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE



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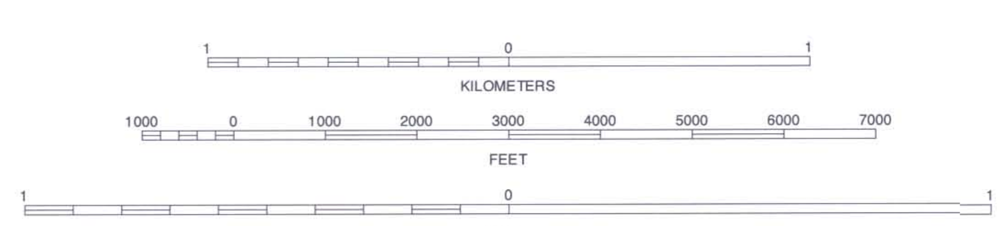
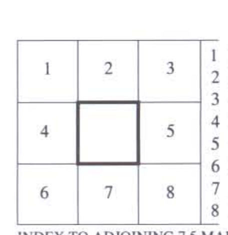
North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.





1 PLATTSBURGH
2 SOUTH HERO
3 GEORGIA PLAINS
4 KEESEVILLE
5 COLCHESTER
6 PORT DOUGLAS
7 JUNIPER ISLAND
8 BURLINGTON

INDEX TO ADJOINING 7.5 MAPS

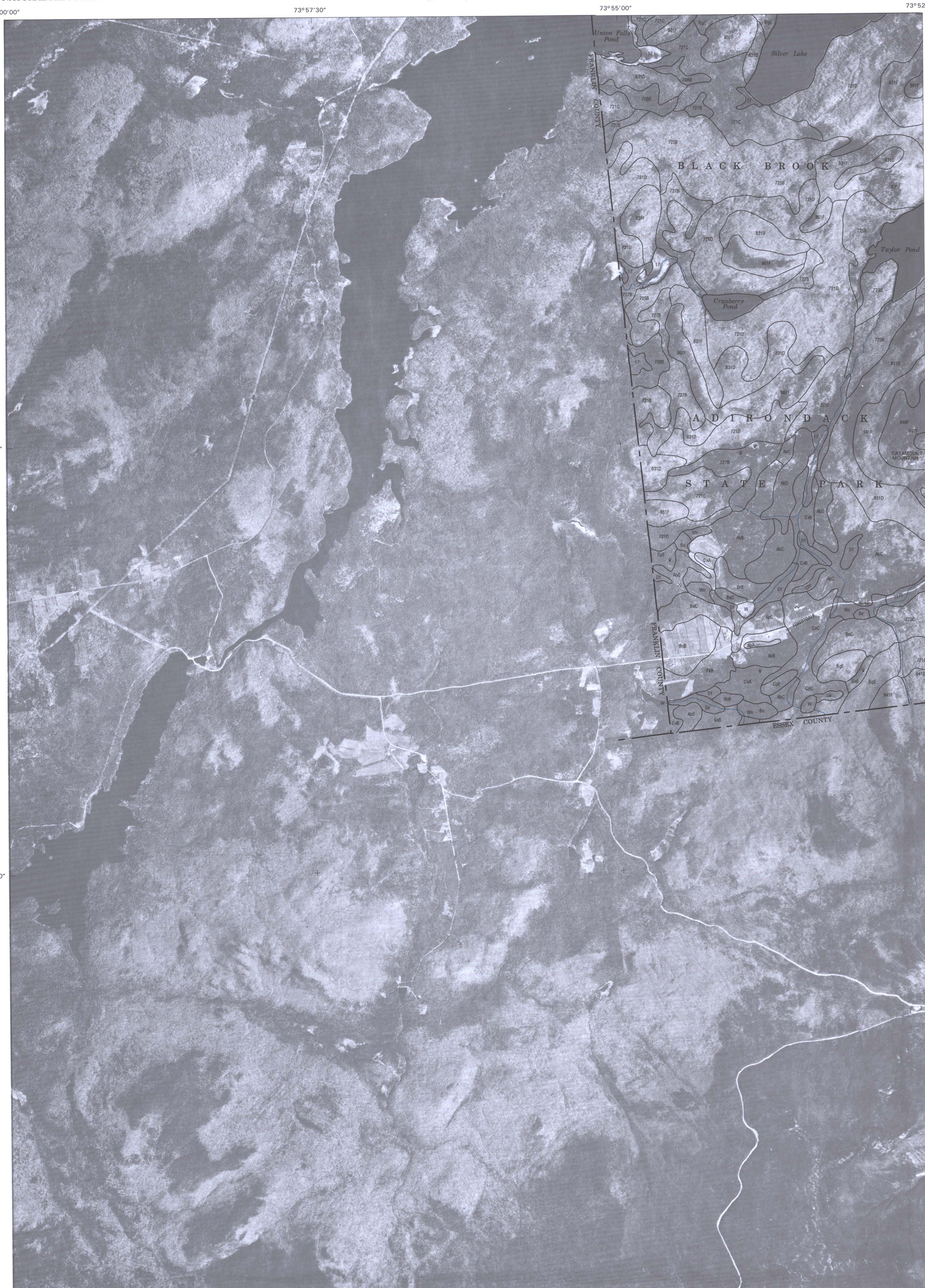
COLCHESTER POINT, NEW YORK
7.5 MINUTE SERIES
SHEET NUMBER 28 OF 33

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLINTON COUNTY, NEW YORK
FRANKLIN FALLS QUADRANGLE
SHEET NUMBER 29 OF 33

(Joins sheet 23, Alder Brook)

74° 00′00″ 73° 57′30″ 73° 55′00″ 73° 52′30″
44° 30′00″ 44° 30′00″



44° 27′30″ 44° 27′30″
44° 25′00″ 44° 25′00″
(Joins sheet 30, Wilmington)

44° 22′30″ 44° 22′30″
74° 00′00″ 73° 57′30″ 73° 55′00″ 73° 52′30″

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

1 0 1
KILOMETERS

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
MILES

1	2	3
4		5
6	7	8

1 LOON LAKE
2 ALDER BROOK
3 REDFORD
4 BLOOMINGDALE
5 WILMINGTON
6 MCKENZIE MOUNTAIN
7 LAKE PLACID
8 KEENE

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FRANKLIN FALLS, NEW YORK
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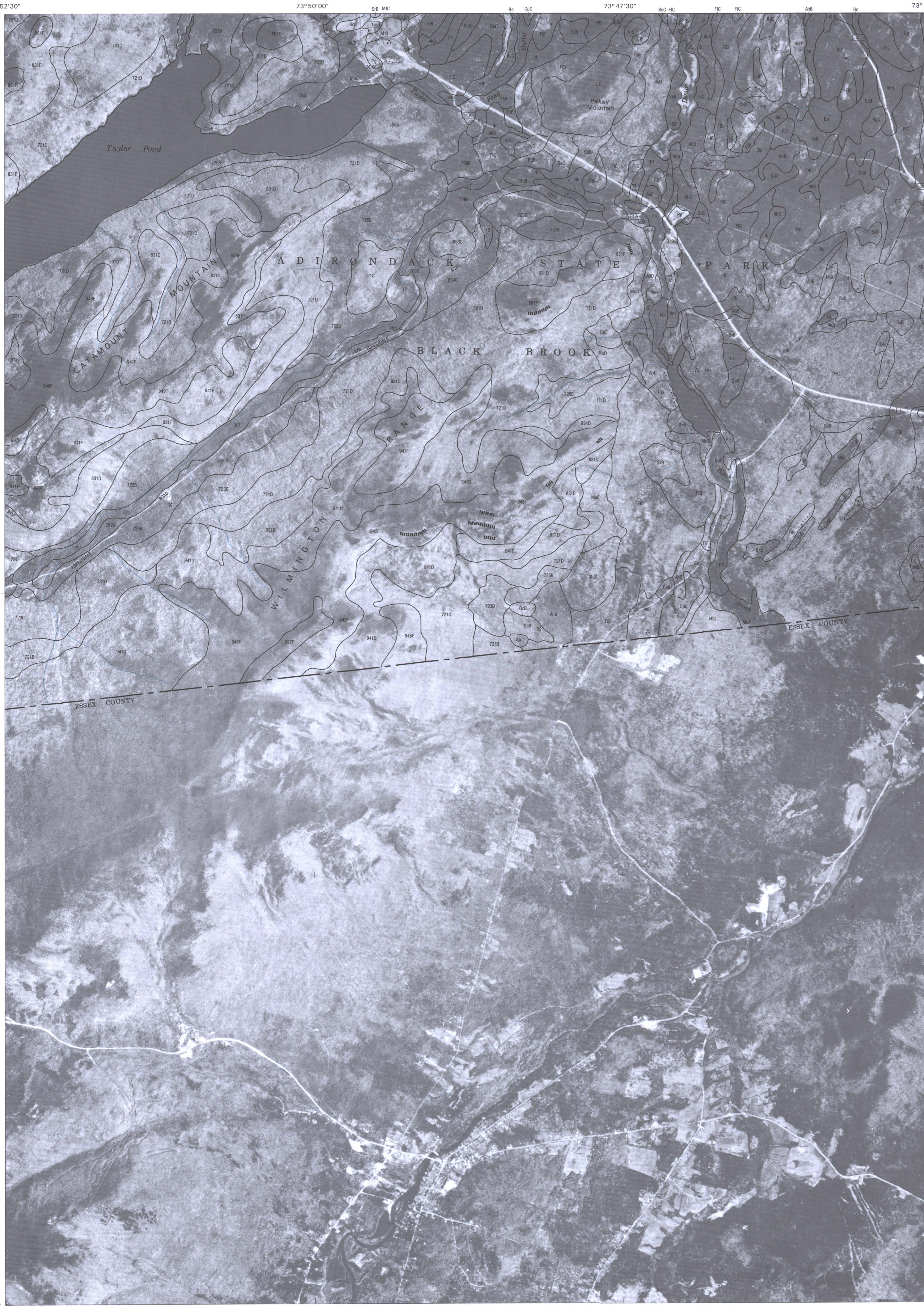
(Joins sheet 24, Redford)

73° 52' 30" 44° 30' 00" — 73° 50' 00" — 73° 47' 30" — 73° 45' 00" 44° 30' 00"

(Joins sheet 29, Franklin Falls)

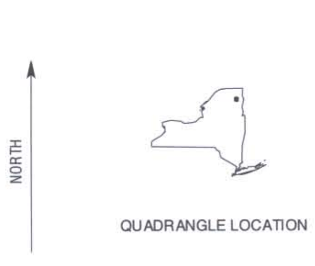


(Joins sheet 31, Au Sable Forks)

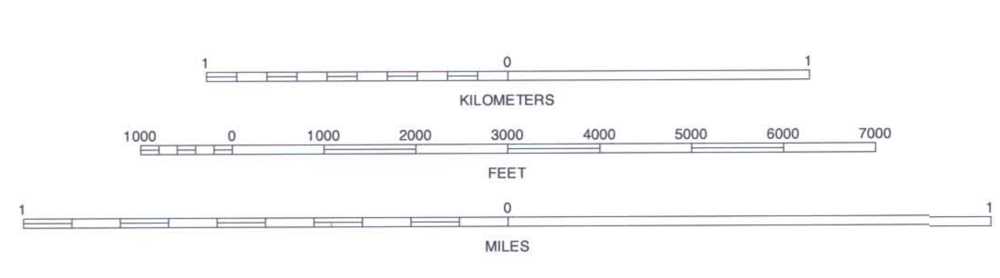
44° 27' 30" — 44° 27' 30"
44° 25' 00" — 44° 25' 00"
44° 22' 30" 73° 52' 30" — 73° 50' 00" — 73° 47' 30" — 73° 45' 00" 44° 22' 30"

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1976 - 1981 aerial photography. Hydrographic data was compiled by U.S. Department of Agriculture, Natural Resources Conservation Service, New York. Cultural data was derived from the New York State Adirondack Park Agency, the U.S. Department of Commerce, Bureau of Census and the U.S. Department of Interior, Geological Survey.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



1	2	3
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1 ALDER BROOK
2 REDFORD
3 PEASLEEVILLE
4 FRANKLIN FALLS
5 AU SABLE FORKS
6 LAKE PLACID
7 KEENE
8 JAY MOUNTAIN

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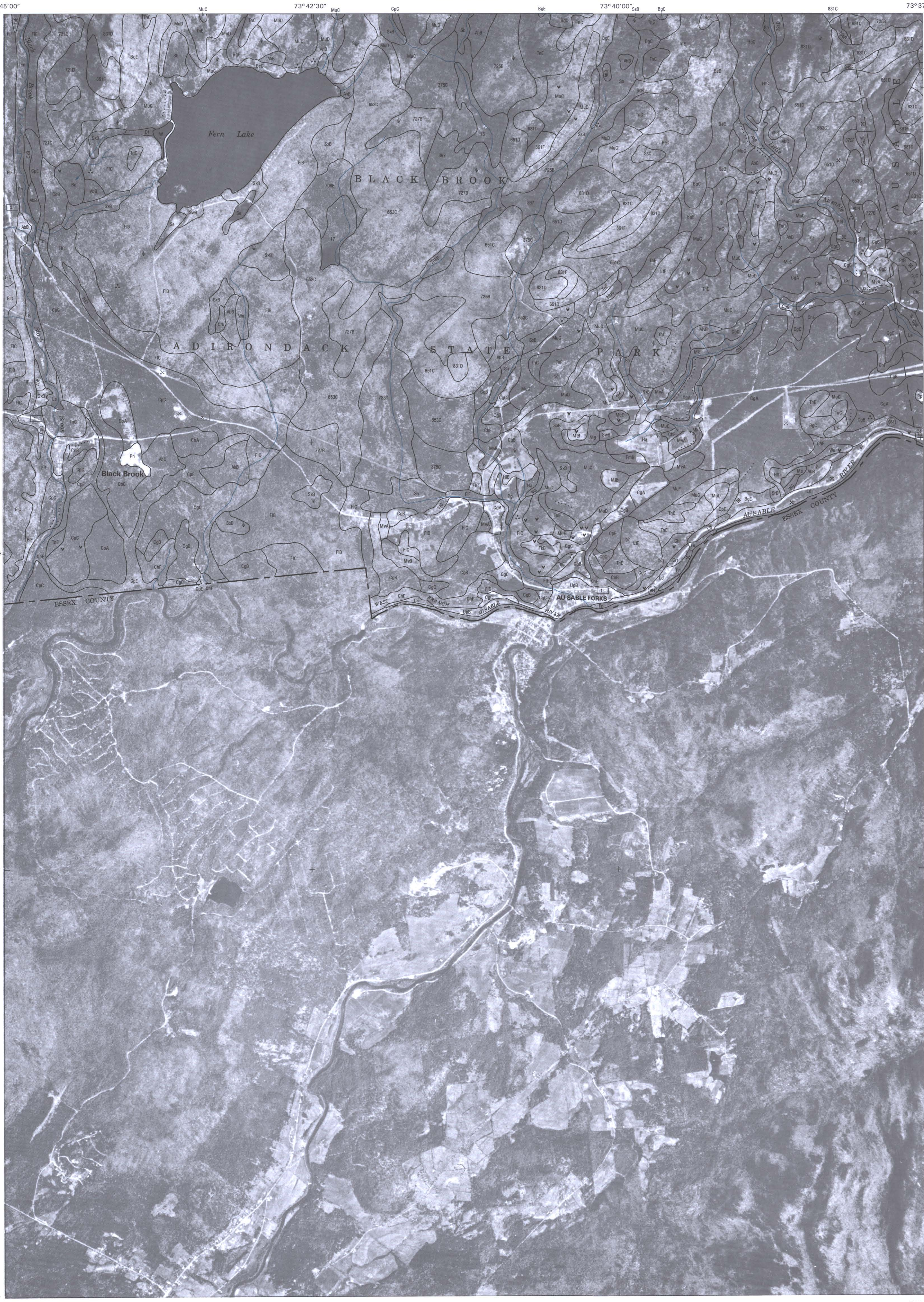
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLINTON COUNTY, NEW YORK
AU SABLE FORKS QUADRANGLE
SHEET NUMBER 31 OF 33



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NORTH

QUADRANGLE LOCATION

KILOMETERS: 1 0 1

FEET: 1000 0 1000 2000 3000 4000 5000 6000 7000

MILES: 1 0 1

1	2	3
4		5
6	7	8

1 REDFORD
2 PEASLEEVILLE
3 PERU
4 WILMINGTON
5 CLINTONVILLE
6 KEENE
7 JAY MOUNTAIN
8 LEWIS

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UNITED STATES
DEPARTMENT OF AGRICULTURE
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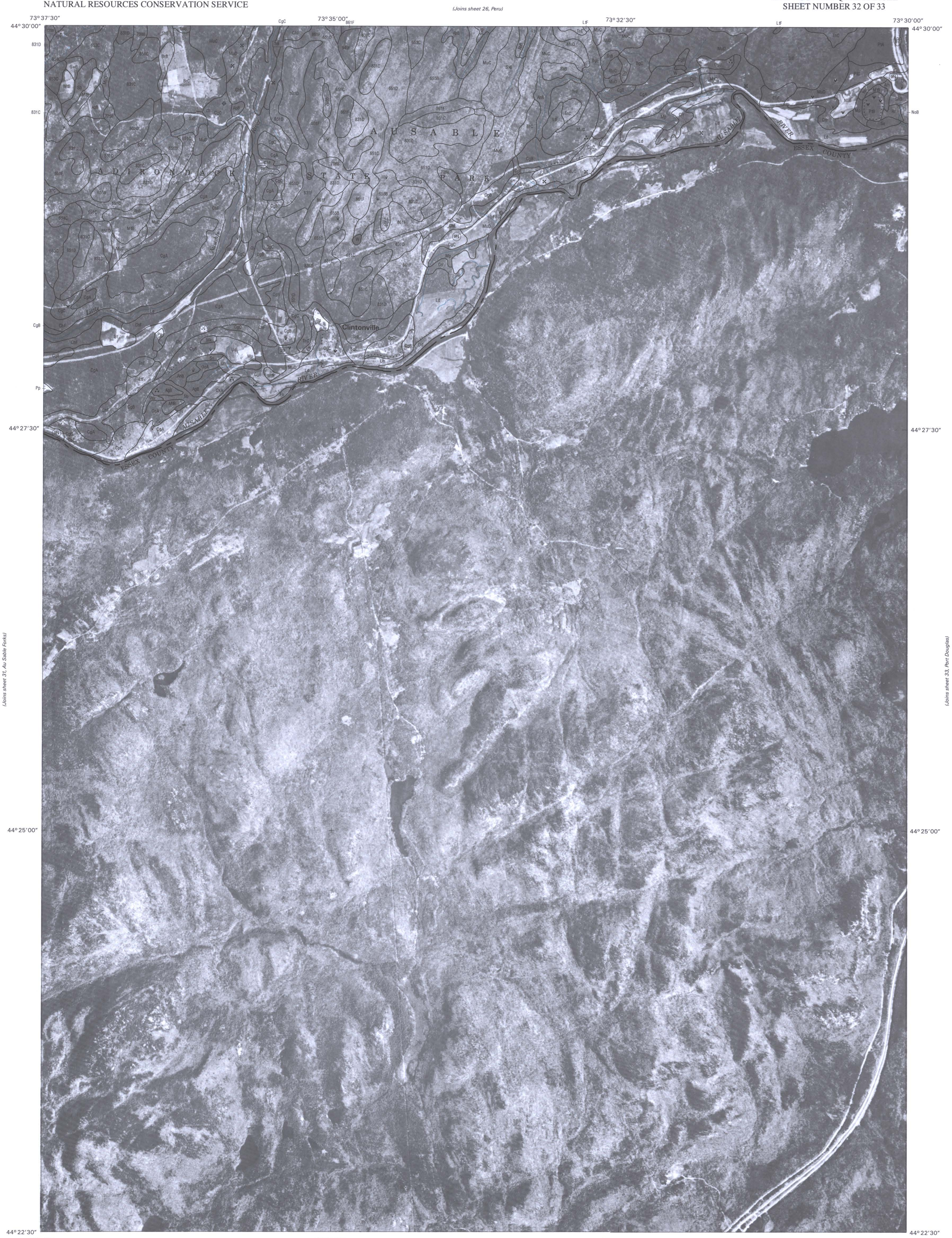
CLINTON COUNTY, NEW YORK
CLINTONVILLE QUADRANGLE
SHEET NUMBER 32 OF 33



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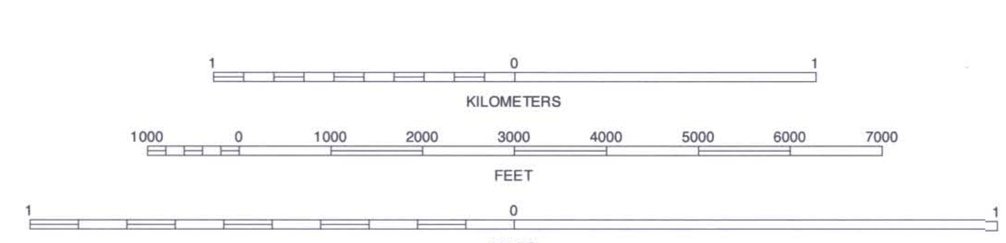
North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



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1 PEASLEEVILLE
2 PERU
3 KEESEVILLE
4 AU SABLE FORKS
5 PORT DOUGLAS
6 JAY MOUNTAIN
7 LEWIS
8 WILLSBORO

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UNITED STATES
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NATURAL RESOURCES CONSERVATION SERVICE

(Joins sheet 27, Keeseville)

(Joins sheet 32, Clintonville)

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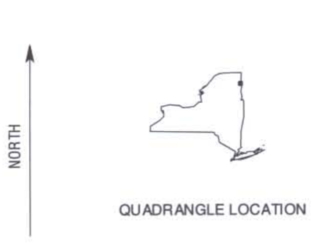
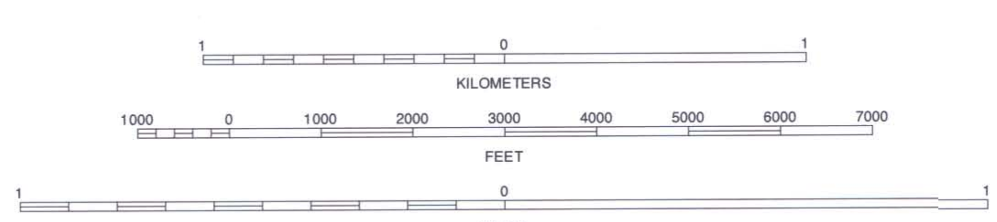
North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



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1 PERU
2 KEESEVILLE
3 COLCHESTER POINT
4 CLINTONVILLE
5 JUNIPER ISLAND
6 LEWIS
7 WILLSBORO
8 CHARLOTTE

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